



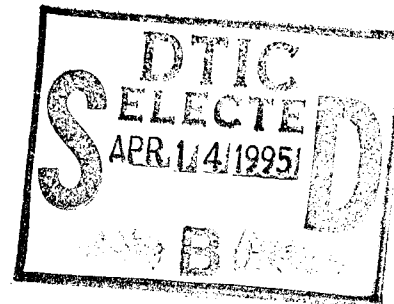
Defense Nuclear Agency
Alexandria, VA 22310-3398



DNA-TR-93-169

Johnston Atoll Plutonium Cleanup Project Contract Bridge Report

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April 1995

Technical Report

CONTRACT No. DNA 001-90-C-0119

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13. ABSTRACT (Maximum 200 words) This report continues the documentation of the operation of TMA/Eberline's Segmented Gate System technology for removing mixed plutonium and americium contamination at DNA's Johnston Atoll site. Contaminated feed is conveyed under arrays of radiation detectors coupled with sophisticated computer software developed by Eberline Instrument Corporation. Segmented gates (chutes) on pneumatically-driven pistons move forward when contamination is detected to remove only the contaminated portion from the main flow of feed material. Only about one pint of contaminant is removed during each diversion event. At the JA site, a 98% volume reduction has been achieved, with the remediated soil cleaned to DNA's criteria for release for unrestricted use of 500 Bq/kg total transuranic alpha contamination and no "hot" particles of greater than 5000 Becquerels. The low level waste concentrate is expected to be packaged for shipment to an approved defense waste disposal site.				
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CONVERSION TABLE

Conversion factors for U.S. Customary to metric (SI) units of measurement.

MULTIPLY -----> BY -----> TO GET
TO GET <----- BY <----- DIVIDE

angstrom	1.000 000 X E -10	meters (m)
atmosphere (normal)	1.013 25 X E +2	kilo pascal (kPa)
bar	1.000 000 X E +2	kilo pascal (kPa)
barn	1.000 000 X E -28	meter ² (m ²)
British thermal unit (thermochemical)	1.054 350 X E +3	joule (J)
calorie (thermochemical)	4.184 000	joule (J)
cal (thermochemical)/cm ²	4.184 000 X E -2	mega joule/m ² (MJ/m ²)
curie	3.700 000 X E +1	* giga becquerel (GBq)
degree (angle)	1.745 329 X E -2	radian (rad)
degree Fahrenheit	$t_K = (t^{\circ}F + 459.67)/1.8$	degree kelvin (K)
electron volt	1.602 19 X E -19	joule (J)
erg	1.000 000 X E -7	joule (J)
erg/second	1.000 000 X E -7	watt (W)
foot	3.048 000 X E -1	meter (m)
foot-pound-force	1.355 818	joule (J)
gallon (U.S. liquid)	3.785 412 X E -3	meter ³ (m ³)
inch	2.540 000 X E -2	meter (m)
jerk	1.00 000 X E +9	joule (J)
joule/kilogram (J/kg) radiation dose absorbed	1.000 000	Gray (Gy)
kilotons	4.183	terajoules
kip (10000 lbf)	4.448 222 X E +3	newton (N)
kip/inch ² (ksi)	6.894 757 X E +3	kilo pascal (kPa)
ktap	1.000 000 X E +2	newton-second/m ² (N-s/m ²)
micron	1.000 000 X E -6	meter (m)
mil	2.540 000 X E -5	meter (m)
mile (international)	1.609 344 X E +3	meter (m)
ounce	2.834 952 X E -2	kilogram (kg)
pound-force (lbs avoirdupois)	4.448 222	newton (N)
pound-force inch	1.129 848 X E +2	newton-meter (N-m)
pound-force/inch	1.751 268 X E +2	newton/meter (N/m)
pound-force/foot ²	4.788 026 X E -2	kilo pascal (kPa)
pound-force/inch ² (psi)	6.894 757	kilo pascal (kPa)
pound-mass (lbm avoirdupois)	4.535 924 X E -1	kilogram (kg)
pound-mass-foot ² (moment of inertia)	4.214 011 X E -2	kilogram-meter ² (kg-m ²)
pound-mass-foot ³	1.601 846 X E +1	kilogram/meter ² (kg-m ³)
rad (radiation dose absorbed)	1.000 000 X E -2	** Gray (Gy)
roentgen	2.579 760 X E -4	coulomb/kilogram (C/kg)
shake	1.000 000 X E -8	second (s)
slug	1.459 390 X E +1	kilogram (kg)
torr (mm Hg, 0°C)	1.333 22 X E -1	kilo pascal (kPa)

*The becquerel (Bq) is the SI unit of radioactivity: 1 Bq = 1 event/s.

**The Gray (GY) is the SI unit of absorbed radiation.

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SECTION 1
INTRODUCTION

1.1 GENERAL.

This summary report covers an extension of DNA Contract DNA001-90-C-0119 during the period from 1 June 1993 to 5 August 1993. This report presents the results of additional plant modifications and completion of construction of sorter conveyor systems 3 and 4, and the data pertaining to soil processing during the period.

1.2 TECHNICAL OBJECTIVE.

The primary objectives during the extension period were to complete construction of sorter conveyor systems 3 and 4 and to continue to process plutonium contaminated soil when modifications or construction was not being performed.

Prior to the start of the extension period, major construction of sorters 3 and 4 began in January 1993. Most of the conveyor systems had been fabricated and emplaced, and installation of the detector systems had been started, however, testing, calibration and electrical system check-outs had not been performed. Additionally, Version 1.11 of the JACC system software was to be installed and tested, remaining electronic components for detector systems were to be procured and installed, and belt weigh scales for both units 3 and 4 had to be installed and calibrated.

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SECTION 2

EXTENSION PERIOD MAINTENANCE AND MODIFICATION OPERATIONS

2.1 PLANT MODIFICATIONS.

At the start of the extension period, soil production was halted as primary emphasis was devoted to completion of units 3 and 4 and plant maintenance.

The majority of the on-island TMA/E staff went on rotation during the period 24 May 1993 to 10 June 1993. During the period 7 to 10 June, TMA/E staff consisted of Mr. Bob Dakin, electrical engineer, Mr. Jim Woods and Mr. Ken Murphy, electronics technicians, and Mr. Dave Lawrence, health physics technician.

During the week of 20 June 1993, JACC version 1.11 software was installed on units 1, 2 and 4. Particle and distributed efficiencies were calculated and completed. Unit 3 was not on-line due to shortages of detector electronics boards and a master controller board.

Two belt weigh scales were installed on units 3 and 4 and the hardware and wiring for a third scale was installed should a convertor for diverted soil be installed. Replacement parts for the weigh scales' electronics had to be secured from the manufacturer, and the scales were calibrated, tested and placed in an operational status. Additionally, the mass flow meter was returned to the factory for repairs and subsequently installed and calibrated.

The segmented gates on units 3 and 4 operate exactly opposite than those on units 1 and 2, in that the gates on units 3 and 4 remain extended during operation and retract to trap the hot particle. This mode of operation caused excessive "splatter" of soil when hitting the gates and engineering changes were made to reduce excessive dust and soil bouncing off the gates. This consisted of installing belt wiper material behind the gates which reduced the dust and soil bounce off the gates.

During the week ending 1 August 1993, modifications and construction was completed on units 3 and 4. Minor modifications to dust misting systems and installation of grizzly conveyor covers remain to be accomplished pending receipt of on-order materials and parts.

2.2 PLANT MAINTENANCE.

In addition to modifications to units 3 and 4, corrosion control and scheduled maintenance were performed on units 1 and 2. Units 1 and 2 grizzly feed belt was damaged and had to be replaced and cracks in the frame were repaired and welded. Other maintenance and repairs were performed to units 1 and 2 as follows:

- a) Installed new grizzly belt skirting and performed adjustments.
- b) Adjusted the screen belt and screen belt skirting.
- c) Installed required weights on vibrating screen shaft.
- d) Adjusted tail pulley skirting on sorter feed.
- e) Cleaned and lubricated complete system.
- f) Adjusted skirting on sorter 1 and 2.
- g) Repaired abrasions and holes on unit 2 belt.
- h) Adjusted skirting and tail pulley on clean belt and day bin.
- i) Installed water misting system on clean stacker.

SECTION 3

SOIL PROCESSING OPERATIONS

3.1 GENERAL.

Soil production continued during the extension period when construction and modifications to units 3 and 4 were halted. Primary production continued with units 1 and 2 and limited production was conducted on unit 4 due to construction.

3.2 PLANT PRODUCTION.

Soil processing was accomplished on 30 days during the extension period. Units 1 and 2 processed soil on a total of 29 days, and unit 4 processed soil on 2 days. Unit 3 did not process soil during this period due to shortage of a master control board and detector boards in its detector box. Figure 3-1, JA SOIL CLEANUP PLANT LOG OVERALL SUMMARY REPORT-COMBINED SORTERS, depicts the daily processed mass in metric tons, cumulative production, weight reduction, and time utilization during the extension period.

Cumulative production during the extension period totaled 5,321 metric tons (Clean + Diverted). Clean soil produced totaled 5,291 metric tons and diverted soil total was 29.44 metric tons.

Weight reduction during the 30 days of processing was 99.5%. The range was from 97.1 to 99.1.

The primary objective during the extension period was to complete construction on units 3 and 4 and production was second. In view of the construction activities by TMA/E, time utilization as it pertains to soil production was an excellent average of 77.4% production rate. Non-availability time as it pertains to production was primarily due to required plant modifications.

Table 3-1. JA soil cleanup plant log overall summary report-combined sorters.

WS4 (ton)	WS5 (ton)	WS6 (ton)	WS7 (ton)	WS8 (ton)	OVR (ton)	H+C (ton)	H+C-WS2 (ton)	OVR (%)	AVL (hr)	WEEKLY H+C (ton)	WS2 (ton)	Date
0	0	0	0	0	4	229	156	6	8.5			21-Jun
0	0	0	0	0	15	224	(19)	6	10.9			22-Jun
0	0	0	0	0	13	227	(14)	5	11.5			23-Jun
0	0	0	0	0	43	217	(23)	15	11.3			24-Jun
0	0	0	0	0	77	176	(63)	24	9.2	1074	1038	25-Jun
0	0	0	0	0	67	218	(11)	23	11.5			28-Jun
0	0	0	0	0	80	198	(14)	27	10.4			29-Jun
0	0	0	0	0	99	120	(78)	33	6.5			30-Jun
0	0	0	0	0	94	138	(56)	33	7.5			02-Jul
0	0	0	0	0	95	132	(73)	32	7.0	806	1039	03-Jul
0	0	0	0	0	103	116	(93)	33	11.4			05-Jul
0	0	0	0	0	79	193	19	31	6.9	309	383	06-Jul
0	0	0	0	0	103	221	(1)	32	11.5			12-Jul
0	0	0	0	0	91	215	20	32	11.5			13-Jul
0	0	0	0	0	67	214	(12)	23	11.5			14-Jul
0	0	0	0	0	85	190	(29)	28	10.4			15-Jul
0	0	0	0	0	87	164	(50)	29	9.0	1005	1077	16-Jul
0	0	0	0	0	79	134	(53)	30	7.5			19-Jul
0	0	0	0	0	67	160	(3)	29	8.8			20-Jul
0	0	0	0	0	52	168	33	28	8.9			21-Jul
2	0	0	0	0	66	167	4	29	9.2			22-Jul
2	0	0	0	0	60	153	(3)	28	8.3			23-Jul
2	0	0	0	0	47	117	1	29	7.1	899	920	24-Jul
2	0	0	0	0	65	180	18	28	9.6			26-Jul
2	0	0	0	0	66	165	0	28	8.4			27-Jul
2	0	0	0	0	75	179	(6)	29	9.3			28-Jul
3	0	0	0	0	72	182	0	28	9.3			29-Jul
3	0	0	0	0	87	224	11	29	11.7			30-Jul
1	0	0	0	0	31	82	7	29	5.3	1012	981	31-Jul
2	0	0	0	0	77	216	16	28	11.4	216	199	02-Aug
4	0	0	0	0	65	179	10	28	9.5			25-Aug
3	0	0	0	0	76	208	20	29	10.5			26-Aug
2	0	0	0	0	72	193	14	29	10.2			27-Aug
2	0	0	0	0	61	184	31	29	10.0	765	689	28-Aug
2	0	0	0	0	75	236	63	30	12.5			30-Aug

Table 3-1. JA soil cleanup plant log overall summary report-combined sorters (Continued).

WS4 (ton)	WS5 (ton)	WS6 (ton)	WS7 (ton)	WS8 (ton)	OVR (ton)	H+C (ton)	H+C-WS2 (ton)	OVR (%)	AVL (hr)	WEEKLY		Date
										H+C (ton)	WS2 (ton)	
2	0	0	0	0	83	236	21	28	12.5			31-Aug
3	0	0	0	0	102	223	14	33	12.3			01-Sep
0	57	54	0	0	0	80	80	0	9.1			03-Sep
0	48	46	0	0	0	52	52	0	8.8	826	597	04-Sep
0	84	82	0	0	0	92	92	0	9.7			07-Sep
4	210	211	0	0	91	421	202	29	11.9			08-Sep
4	220	221	0	0	86	439	214	28	12.2			09-Sep
2	57	54	0	0	30	410	213	13	11.1			10-Sep
1	110	111	0	0	21	229	127	17	6.7	1592	744	11-Sep
3	227	224	0	0	47	436	229	18	11.7			13-Sep
3	225	221	0	0	39	440	219	15	11.8			14-Sep
2	222	222	0	0	52	434	237	21	11.6			15-Sep
3	226	224	0	0	54	436	236	21	11.8			16-Sep
2	221	217	0	0	50	438	222	19	11.7			17-Sep
3	121	119	0	0	28	236	115	19	6.5	2420	1161	18-Sep
3	191	186	0	0	37	389	206	17	10.7			20-Sep
3	212	209	0	0	45	419	229	19	11.3			21-Sep
6	207	207	0	0	45	419	223	19	11.4			22-Sep
4	220	220	0	0	50	435	225	19	11.6			23-Sep
3	152	151	0	0	38	321	154	18	8.9			24-Sep
2	154	153	0	0	40	316	173	22	8.9	2299	1090	25-Sep
3	219	216	0	0	66	435	233	25	12.0			27-Sep
2	180	175	0	0	70	408	197	25	11.5			28-Sep
5	209	211	0	0	66	432	226	24	12.0			29-Sep
10	187	181	0	0	69	434	218	24	11.7			30-Sep
9	218	219	0	0	77	447	221	25	12.0			01-Oct
4	131	129	0	0	44	266	134	25	7.5	2422	1193	02-Oct
7	219	221	0	0	61	450	229	22	12.0			04-Oct
124	4,528	4,483	0	0	10,355	37,061	5,699		2,131	36,611	30,959	TOTAL
63	63	63	63	63	216	232	228	25	9.7	691	584	DAY/WK AVG
							214		219	53	53	NUMB DAYS/WKS

APPENDIX

JA SOIL CLEANUP PLANT LOG SUMMARIES

JA SOIL CLEANUP PLANT LOG SUMMARY

SORTER 1 21-Jun-93

AVERAGE BACKGROUND COUNT RATE 0.73 ± 0.04 c/sec
 SORTER SOIL DENSITY 1.35 tons/m³
 GROUND SOIL DENSITY 1.65 tons/m³

	CONTAMINATED	CLEAN
MASS TOTAL	0.28 tons	120.4 tons
MAXIMUM/SORT	4.7 kg	62.9 kg
MINIMUM/SORT	0.8 kg	58.2 kg

WEIGHT RECOVERY OR VOLUME RECOVERY 99.8%
 EQUIVALENT SOIL-IN-GROUND 0.22 yd³ 95.5 yd³ 95.7 yd³/day

PARTICLE ACTIVITY (MAXIMUM ESTIMATE)
 TOTAL 4,983 kBq
 MAXIMUM/SORT 597 kBq
 MINIMUM/SORT 3.1 kBq

DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY
 MAXIMUM/SORT 1,657 kBq (4,087)kBq
 MINIMUM/SORT 281 kBq 8 kBq
 SPECIFIC ACTIVITY 0 Bq -18 kBq
 5,984 Bq/kg (34)Bq/kg

WORK HISTORY

WORK DAY START 04:45 AM
 PLANT START-UP 04:45 AM
 START SOIL PROCESSING 05:11 AM
 LUNCH START 11:30 AM

WORK DAY END 04:30 PM
 PLANT SHUT-DOWN 04:30 PM
 END SOIL PROCESSING 03:55 PM
 LUNCH PERIOD 0.0 hr

WORK HOURS 11.8 hr
 AVAILABLE HOURS 11.8 hr
 ACTUAL PROCESS HOURS (total 20-sec records) 10.66 hr
 DOWN-TIME 1.09 hr
 TOTAL SYSTEM PAUSE 0.09 hr
 NONAVAILABLE HOURS 0.0 hr
 START-UP 0.44 hr
 SHUT-DOWN 0.57 hr
 PLANT PERFORMANCE 90.7%
 PRODUCTIVITY 90.7%

TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 2,176

NONPROCESS RECORDS (Test, calibration, etc) 5

20-SEC PROCESS RECORDS

TOTAL SORT 1,919
 NO SORT 0 MD>0 & MND=0
 SOME SORT 1,732 AD=0 & MD=0 & MND>0
 UNEXPLAINED RECORDS 187 AD>0&0<MD<MNDmax&MND<MNDmax
 0
 0<AD<1kBq & MD>0 2
 AD=0 & MD 0
 AD<0 & MD 0
 ACT_P <5 kBq 47 18.3%

UNEXPLAIN PAUSE
 TIME TIME
 05:51:52 05:34
 13:07:52

JA SOIL CLEANUP PLANT LOG SUMMARY

2-SEC COUNT PERIODS

19,190

2-SEC RECORDS WITH SORTS

257 (ACT_P >0 kBq)

2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR

2 DETECTORS	61	91.0%
3 DETECTORS	6	9.0%
4 DETECTORS	0	0.0%
5 DETECTORS	0	0.0%
6 DETECTORS	0	0.0%
7 DETECTORS	0	0.0%
8 DETECTORS	0	0.0%

TOTAL 67

NET 2-SEC RECORDS WITH SORTS

190

2-SEC PERIODS WITH NO SORTS

19,000

AVG TIME BETWEEN 2-SEC SORTS

202.0 sec

1-GATE SORTS		131	ACT_ND	NUMBER	SPEC_A	ACT_P	SORT FREQ%		ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)		(kBq)
1	0	0.0%	-14000	1	-223	4000	10	3.9%	4
2	17	13.0%	-12000	8	-191	8000	105	40.9%	8
3	20	15.3%	-10000	5	-159	12000	43	16.7%	12
4	23	17.6%	-8000	23	-127	16000	25	9.7%	16
5	31	23.7%	-6000	124	-95	20000	16	6.2%	20
6	17	13.0%	-4000	320	-64	24000	12	4.7%	24
7	20	15.3%	-2000	517	-32	28000	8	3.1%	28
8	3	2.3%	0	489	0	32000	6	2.3%	32
TOTAL	131		2000	297	32	36000	5	1.9%	36
			4000	107	64	40000	6	2.3%	40
2-GATE SORTS		126	6000	27	95	44000	0	0.0%	44
DETECTR	SORTS	FREQ%	8000	5	127	48000	2	0.8%	48
8			10000	1	159	52000	3	1.2%	52
9	7	5.6%	12000	0	191	56000	1	0.4%	56
10	14	11.1%	14000	0	223	60000	2	0.8%	60
11	22	17.5%	16000	0	254	64000	4	1.6%	64
12	29	23.0%	18000	0	286	68000	2	0.8%	68
13	23	18.3%	20000	0	318	72000	1	0.4%	72
14	18	14.3%	22000	0	350	76000	1	0.4%	76
15	13	10.3%	24000	0	382	80000	0	0.0%	80
TOTAL	126		26000	0	413	84000	1	0.4%	84
			>28000	0	0	>84000	4	1.6%	>84
			TOTAL	1924		TOTAL	257		

SUMMARY TOTALS

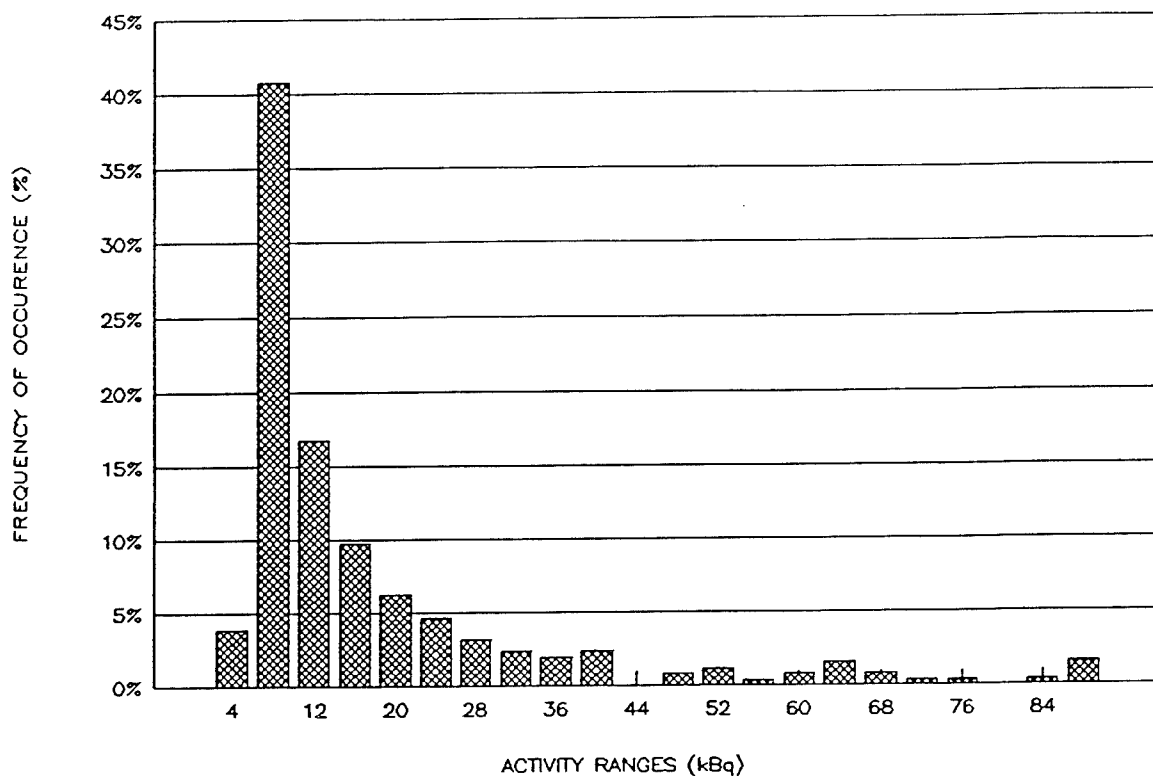
HOT PARTICLE EVENTS	261	SORTS BY ONE GATE ONLY	131
MULTIPARTICLE EVENTS	87	SORTS BY TWO GATES	126
DISTRIBUTED EVENTS	0		

REC CODE EXPLANATION

1.00 Source check (Soil on belt)
 2.00 Empty belt
 3.00 Test (No process soil)

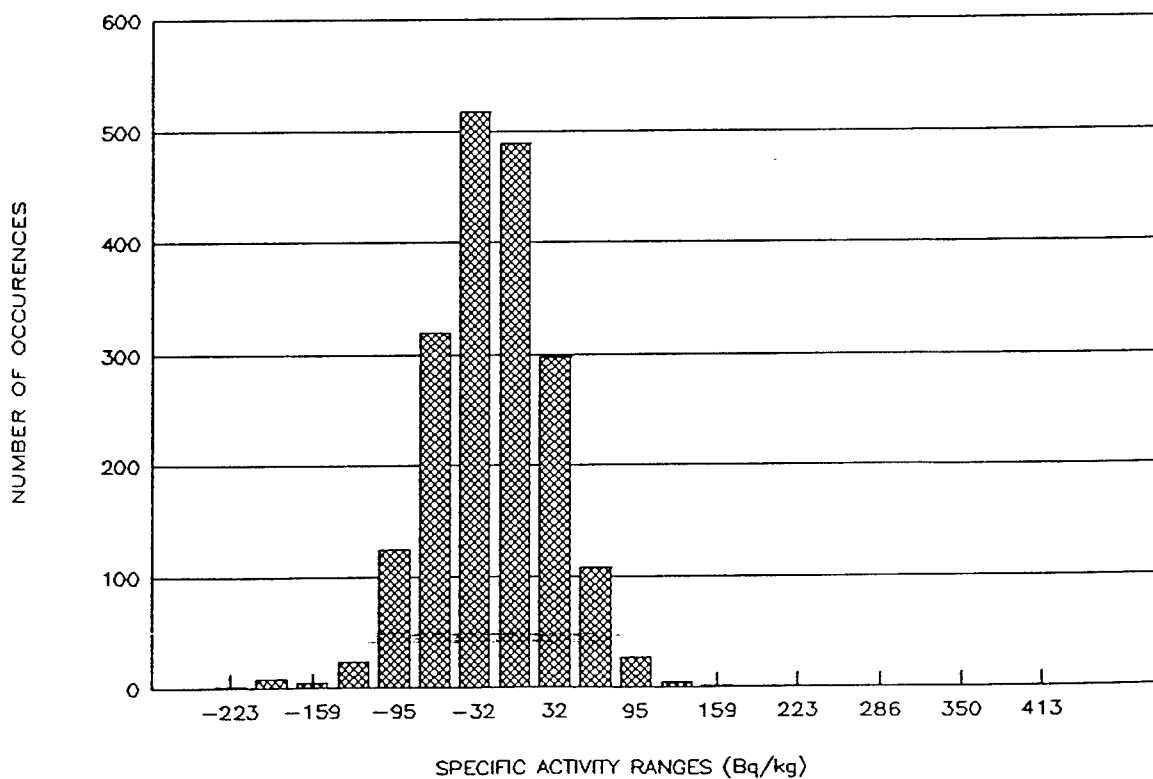
JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 21-Jun-93



CLEAN SOIL SPECIFIC ACTIVITY

SORTER 1 LOG DATA FOR 21-Jun-93



JA SOIL CLEANUP PLANT LOG SUMMARY

SORTER 2 21-Jun-93

AVERAGE BACKGROUND COUNT RATE	0.80 ± 0.02 c/sec		
SORTER SOIL DENSITY	1.35 tons/m ³		
GROUND SOIL DENSITY	1.65 tons/m ³		
		CONTAMINATED	CLEAN
MASS TOTAL		0.88 tons	107.7 tons
MAXIMUM/SORT		66 kg	62.9 kg
MINIMUM/SORT		0.8 kg	55 kg
WEIGHT RECOVERY OR VOLUME RECOVERY			99.2%
EQUIVALENT SOIL-IN-GROUND	0.70 yd ³	85.4 yd ³	86.1 yd ³ /day
PARTICLE ACTIVITY (MAXIMUM ESTIMATE)			
TOTAL	13,366 kBq		
MAXIMUM/SORT	3,952 kBq		
MINIMUM/SORT	3.4 kBq		
DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY			
MAXIMUM/SORT	4,656 kBq	8,211 kBq	
MINIMUM/SORT	2508 kBq	17 kBq	
SPECIFIC ACTIVITY	-208 Bq	-15 kBq	
	5,274 Bq/kg	76 Bq/kg	
WORK HISTORY			
WORK DAY START	04:45 AM	WORK DAY END	04:30 PM
PLANT START-UP	04:45 AM	PLANT SHUT-DOWN	04:30 PM
START SOIL PROCESSING	12:00 AM 0510	END SOIL PROCESSING	04:00 PM
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 hr
WORK HOURS		11.8 hr	
AVAILABLE HOURS		11.8 hr	
ACTUAL PROCESS HOURS (total 20-sec records)		9.59 hr	
DOWN-TIME		2.16 hr	
TOTAL SYSTEM PAUSE		6.45 hr	(0.16)
NONAVAILABLE HOURS		0.0 hr	
START-UP		-4.74 hr	(0.41)
SHUT-DOWN		0.50 hr	
PLANT PERFORMANCE		81.6%	
PRODUCTIVITY		81.6%	

TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)	1,927		
NONPROCESS RECORDS (Test, calibration, etc)	0		
20-SEC PROCESS RECORDS	1,726		
TOTAL SORT	6 MD>0 & MND=0		
NO SORT	1,274 AD=0 & MD=0 & MND>0		
SOME SORT	445 AD>0&0<MD<MNDmax&MND<MNDmax		
UNEXPLAINED RECORDS	1		
0<AD<1kBq & MD>0	7	UNEXPLAIN	PAUSE
AD=0 & MD	3	TIME	TIME
AD<0 & MD	2	00:00:36	00:00
ACT_P <5 kBq	34 16.9%	01:45:59	02:20

JA SOIL CLEANUP PLANT LOG SUMMARY

2-SEC COUNT PERIODS	17,260	05:13:33	03:50
2-SEC RECORDS WITH SORTS	201 (ACT_P >0 kBq)	05:21:33	05:34
2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR		05:47:53	07:19
2 DETECTORS	36 70.6%	05:51:13	07:21
3 DETECTORS	8 15.7%	07:17:53	08:08
4 DETECTORS	4 7.8%	07:20:52	08:10
5 DETECTORS	3 5.9%	08:08:32	
6 DETECTORS	0 0.0%	08:10:25	
7 DETECTORS	0 0.0%	11:49:03	
8 DETECTORS	0 0.0%	15:59:23	
TOTAL	51		
NET 2-SEC RECORDS WITH SORTS	150		
2-SEC PERIODS WITH NO SORTS	17,110		
AVG TIME BETWEEN 2-SEC SORTS	230.1 sec		

1-GATE SORTS		101	ACT_NO	NUMBER	SPEC_A	ACT_P	SORT FREQ%		ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)		(kBq)
1	6	5.9%	-14000	1	-223	4000	9	4.5%	4
2	14	13.9%	-12000	0	-191	8000	69	34.3%	8
3	24	23.8%	-10000	0	-159	12000	30	14.9%	12
4	24	23.8%	-8000	3	-127	16000	21	10.4%	16
5	20	19.8%	-6000	17	-95	20000	13	6.5%	20
6	5	5.0%	-4000	60	-64	24000	8	4.0%	24
7	6	5.9%	-2000	81	-32	28000	7	3.5%	28
8	2	2.0%	0	125	0	32000	4	2.0%	32
TOTAL	101		2000	135	32	36000	7	3.5%	36
			4000	218	64	40000	4	2.0%	40
2-GATE SORTS		100	6000	310	95	44000	1	0.5%	44
DETECTR	SORTS	FREQ%	8000	366	127	48000	0	0.0%	48
8			10000	239	159	52000	0	0.0%	52
9	9	9.0%	12000	125	191	56000	3	1.5%	56
10	15	15.0%	14000	36	223	60000	1	0.5%	60
11	22	22.0%	16000	8	254	64000	3	1.5%	64
12	19	19.0%	18000	2	286	68000	3	1.5%	68
13	22	22.0%	20000	0	318	72000	1	0.5%	72
14	9	9.0%	22000	0	350	76000	2	1.0%	76
15	4	4.0%	24000	0	382	80000	0	0.0%	80
TOTAL	100		26000	0	413	84000	1	0.5%	84
			>28000	0	0	>84000	14	7.0%	>84
			TOTAL	1726		TOTAL	201		

SUMMARY TOTALS

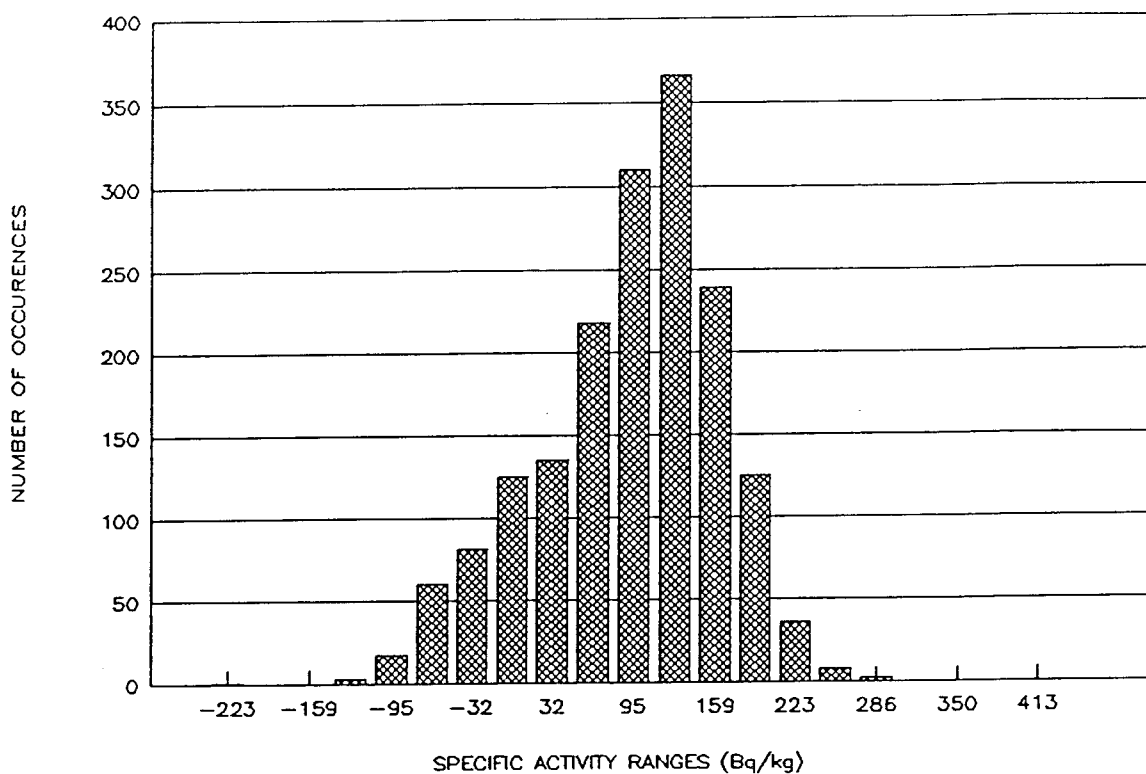
HOT PARTICLE EVENTS	202	SORTS BY ONE GATE ONLY	101
MULTIPARTICLE EVENTS	408	SORTS BY TWO GATES	100
DISTRIBUTED EVENTS	498		

REC CODE EXPLANATION

1.00 Source check (Soil on belt)
2.00 Empty belt
3.00 Test (No process soil)

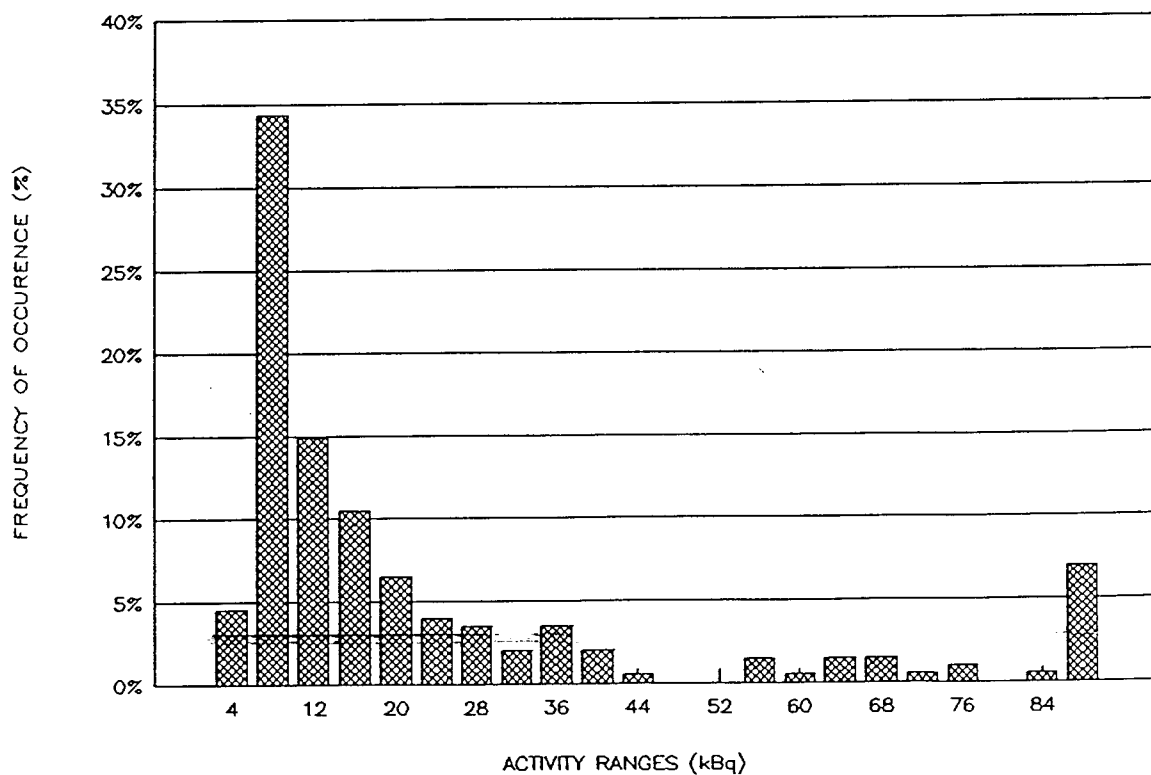
CLEAN SOIL SPECIFIC ACTIVITY

SORTER 2 LOG DATA FOR 21-Jun-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 21-Jun-93



JA SOIL CLEANUP PLANT LOG SUMMARY

SORTER 1 22-Jun-93

AVERAGE BACKGROUND COUNT RATE	0.72 ± 0.04 c/sec		
SORTER SOIL DENSITY	1.35 tons/m ³		
GROUND SOIL DENSITY	1.65 tons/m ³		
	CONTAMINATED	CLEAN	
MASS TOTAL	0.24 tons	113.3 tons	
MAXIMUM/SORT	66 kg	62.9 kg	
MINIMUM/SORT	0.8 kg	58.9 kg	
WEIGHT RECOVERY OR VOLUME RECOVERY			99.8%
EQUIVALENT SOIL-IN-GROUND	0.19 yd ³	89.8 yd ³	90.0 yd ³ /day
PARTICLE ACTIVITY (MAXIMUM ESTIMATE)			
TOTAL	3,134 kBq		
MAXIMUM/SORT	114 kBq		
MINIMUM/SORT	3.1 kBq		
DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY	1,049 kBq	2,510 kBq	
MAXIMUM/SORT	74 kBq	13 kBq	
MINIMUM/SORT	0 Bq	-11 kBq	
SPECIFIC ACTIVITY	4,395 Bq/kg	22 Bq/kg	
WORK HISTORY			
WORK DAY START	05:00 AM	WORK DAY END	04:30 PM
PLANT START-UP	05:00 AM	PLANT SHUT-DOWN	04:30 PM
START SOIL PROCESSING	05:37 AM	END SOIL PROCESSING	04:05 PM
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 hr
WORK HOURS	11.5 hr		
AVAILABLE HOURS	11.5 hr		
ACTUAL PROCESS HOURS (total 20-sec records)	10.03 hr		
DOWN-TIME	1.47 hr		
TOTAL SYSTEM PAUSE	0.46 hr		
NONAVAILABLE HOURS	0.0 hr		
START-UP	0.63 hr		
SHUT-DOWN	0.40 hr		
PLANT PERFORMANCE	87.2%		
PRODUCTIVITY	87.2%		
TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)	1,974		
NONPROCESS RECORDS (Test, calibration, etc)	4		
20-SEC PROCESS RECORDS	1,805		
TOTAL SORT	1 MD>0 & MND=0		
NO SORT	1,692 AD=0 & MD=0 & MND>0		
SOME SORT	112 AD>0&0<MD<MNDmax&MND<MNDmax		
UNEXPLAINED RECORDS	0		
0<AD<1kBq & MD>0	1	UNEXPLAIN	PAUSE
AD=0 & MD	0	TIME	TIME
AD<0 & MD	0	06:30:08	10:01
ACT_P <5 kBq	32 18.9%		10:27

JA SOIL CLEANUP PLANT LOG SUMMARY

2-SEC COUNT PERIODS 18,050
 2-SEC RECORDS WITH SORTS 169 (ACT_P >0 kBq)
 2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR
 2 DETECTORS 38 90.5%
 3 DETECTORS 3 7.1%
 4 DETECTORS 1 2.4%
 5 DETECTORS 0 0.0%
 6 DETECTORS 0 0.0%
 7 DETECTORS 0 0.0%
 8 DETECTORS 0 0.0%
 TOTAL 42
 NET 2-SEC RECORDS WITH SORTS 127
 2-SEC PERIODS WITH NO SORTS 17,923
 AVG TIME BETWEEN 2-SEC SORTS 284.3 sec

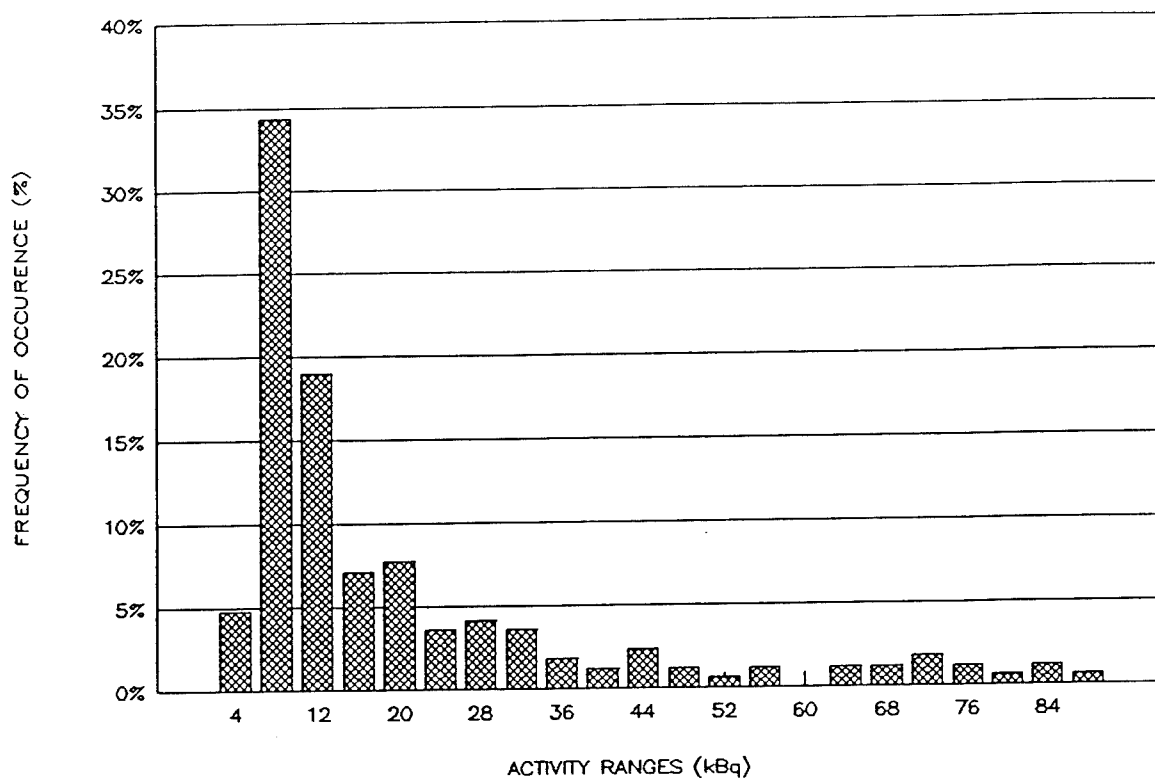
1-GATE SORTS		85	ACT_ND	NUMBER	SPEC_A	ACT_P	SORT FREQ%		ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)		(kBq)
1	0	0.0%	-14000	1	-223	4000	8	4.7%	4
2	8	9.4%	-12000	1	-191	8000	58	34.3%	8
3	10	11.8%	-10000	1	-159	12000	32	18.9%	12
4	21	24.7%	-8000	9	-127	16000	12	7.1%	16
5	19	22.4%	-6000	69	-95	20000	13	7.7%	20
6	15	17.6%	-4000	137	-64	24000	6	3.6%	24
7	10	11.8%	-2000	201	-32	28000	7	4.1%	28
8	2	2.4%	0	263	0	32000	6	3.6%	32
TOTAL	85		2000	274	32	36000	3	1.8%	36
			4000	326	64	40000	2	1.2%	40
2-GATE SORTS		84	6000	276	95	44000	4	2.4%	44
DETECTR	SORTS	FREQ%	8000	169	127	48000	2	1.2%	48
8			10000	65	159	52000	1	0.6%	52
9	2	2.4%	12000	14	191	56000	2	1.2%	56
10	8	9.5%	14000	3	223	60000	0	0.0%	60
11	14	16.7%	16000	0	254	64000	2	1.2%	64
12	20	23.8%	18000	0	286	68000	2	1.2%	68
13	21	25.0%	20000	0	318	72000	3	1.8%	72
14	15	17.9%	22000	0	350	76000	2	1.2%	76
15	4	4.8%	24000	0	382	80000	1	0.6%	80
TOTAL	84		26000	0	413	84000	2	1.2%	84
			>28000	0	0	>84000	1	0.6%	>84
			TOTAL	1809		TOTAL	169		
SUMMARY TOTALS									
HOT PARTICLE EVENTS			168	SORTS BY ONE GATE ONLY			85		
MULTIPARTICLE EVENTS			49	SORTS BY TWO GATES			84		
DISTRIBUTED EVENTS			83						

REC CODE EXPLANATION

1.00 Source check (Soil on belt)
 2.00 Empty belt
 3.00 Test (No process soil)

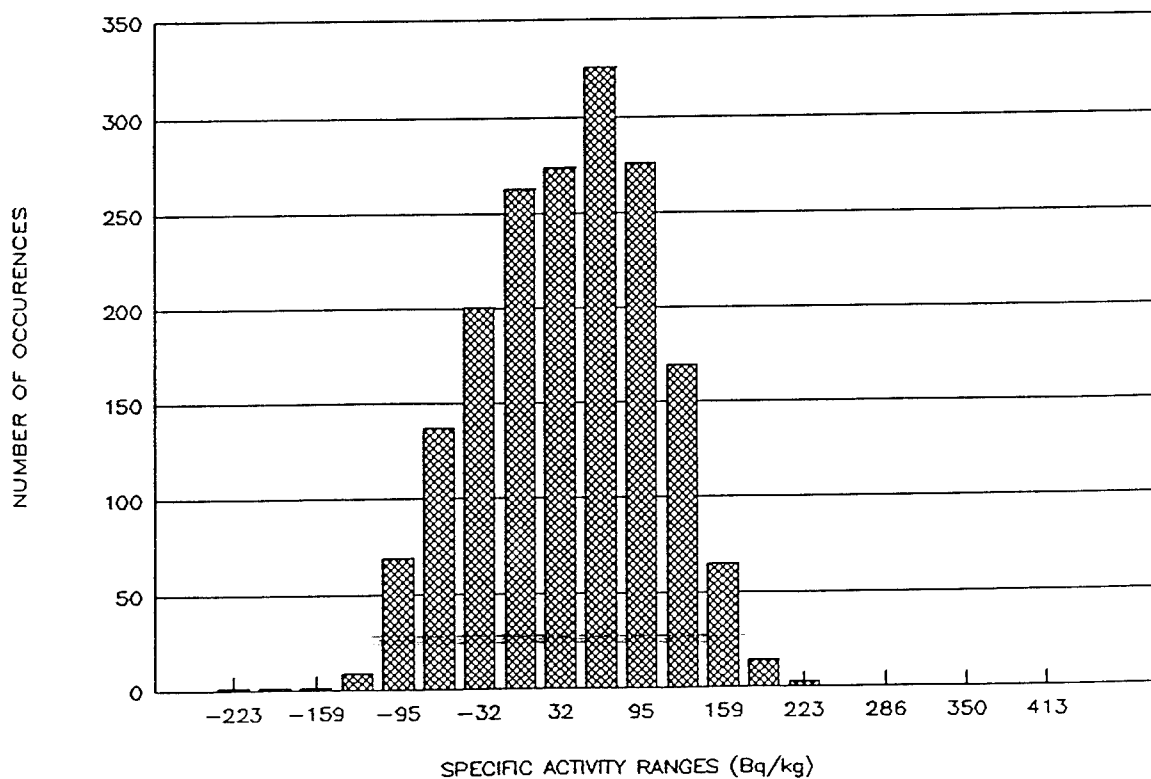
JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 22-Jun-93



CLEAN SOIL SPECIFIC ACTIVITY

SORTER 1 LOG DATA FOR 22-Jun-93



JA SOIL CLEANUP PLANT LOG SUMMARY

SORTER 2 22-Jun-93

AVERAGE BACKGROUND COUNT RATE	0.79 ± 0.03 c/sec		
SORTER SOIL DENSITY	1.35 tons/m ³		
GROUND SOIL DENSITY	1.65 tons/m ³		
	CONTAMINATED	CLEAN	
MASS TOTAL	0.49 tons	109.5 tons	
MAXIMUM/SORT	66 kg	62.9 kg	
MINIMUM/SORT	0.8 kg	58.2 kg	
WEIGHT RECOVERY OR VOLUME RECOVERY			99.6%
EQUIVALENT SOIL-IN-GROUND	0.39 yd ³	86.8 yd ³	87.2 yd ³ /day
PARTICLE ACTIVITY (MAXIMUM ESTIMATE)			
TOTAL	2,981 kBq		
MAXIMUM/SORT	165 kBq		
MINIMUM/SORT	3.8 kBq		
DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY	1,004 kBq	3,770 kBq	
MAXIMUM/SORT	95 kBq	23 kBq	
MINIMUM/SORT	0 Bq	-11 kBq	
SPECIFIC ACTIVITY	2,029 Bq/kg	34 Bq/kg	
WORK HISTORY			
WORK DAY START	05:00 AM	WORK DAY END	04:30 PM
PLANT START-UP	05:00 AM	PLANT SHUT-DOWN	04:30 PM
START SOIL PROCESSING	05:37 AM	END SOIL PROCESSING	04:06 PM
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 hr
WORK HOURS	11.5 hr		
AVAILABLE HOURS	11.5 hr		
ACTUAL PROCESS HOURS (total 20-sec records)	9.72 hr		
DOWN-TIME	1.78 hr		
TOTAL SYSTEM PAUSE	0.80 hr		
NONAVAILABLE HOURS	0.0 hr		
START-UP	0.63 hr		
SHUT-DOWN	0.40 hr		
PLANT PERFORMANCE	84.5%		
PRODUCTIVITY	84.5%		
TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)	1,889		
NONPROCESS RECORDS (Test, calibration, etc)	5		
20-SEC PROCESS RECORDS	1,749		
TOTAL SORT	5 MD>0 & MND=0		
NO SORT	1,635 AD=0 & MD=0 & MND>0		
SOME SORT	109 AD>0&0<MD<MNDmax&MND<MNDmax		
UNEXPLAINED RECORDS	0		
0<AD<1kBq & MD>0	2	UNEXPLAIN	PAUSE
AD=0 & MD	3	TIME	TIME
AD<0 & MD	0	10:37:04	10:01
ACT_P <5 kBq	20 14.3%	11:25:43	10:27

JA SOIL CLEANUP PLANT LOG SUMMARY

2-SEC COUNT PERIODS	17,490	11:32:14	10:29
2-SEC RECORDS WITH SORTS	140 (ACT_P >0 kBq)	15:43:34	11:18
2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR		16:05:54	11:20
2 DETECTORS	31 93.9%		11:26
3 DETECTORS	2 6.1%		
4 DETECTORS	0 0.0%		
5 DETECTORS	0 0.0%		
6 DETECTORS	0 0.0%		
7 DETECTORS	0 0.0%		
8 DETECTORS	0 0.0%		
TOTAL	33		
NET 2-SEC RECORDS WITH SORTS	107		
2-SEC PERIODS WITH NO SORTS	17,383		
AVG TIME BETWEEN 2-SEC SORTS	326.9 sec		

1-GATE SORTS	71	ACT_NO	NUMBER	SPEC_A	ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)	(kBq)
1	1	1.4%	-14000	0	-223	4000	5	3.6%
2	4	5.6%	-12000	1	-191	8000	56	40.0%
3	9	12.7%	-10000	4	-159	12000	22	15.7%
4	27	38.0%	-8000	38	-127	16000	9	6.4%
5	15	21.1%	-6000	107	-95	20000	3	2.1%
6	8	11.3%	-4000	194	-64	24000	2	1.4%
7	7	9.9%	-2000	210	-32	28000	7	5.0%
8	0	0.0%	0	170	0	32000	9	6.4%
TOTAL	71		2000	108	32	36000	4	2.9%
			4000	150	64	40000	2	1.4%
2-GATE SORTS	69		6000	247	95	44000	2	1.4%
DETECTR	SORTS	FREQ%	8000	230	127	48000	3	2.1%
8			10000	147	159	52000	0	0.0%
9	2	2.9%	12000	76	191	56000	1	0.7%
10	4	5.8%	14000	34	223	60000	1	0.7%
11	16	23.2%	16000	18	254	64000	1	0.7%
12	21	30.4%	18000	11	286	68000	2	1.4%
13	15	21.7%	20000	7	318	72000	1	0.7%
14	8	11.6%	22000	1	350	76000	3	2.1%
15	3	4.3%	24000	1	382	80000	3	2.1%
TOTAL	69		26000	0	413	84000	1	0.7%
			>28000	0	0	>84000	3	2.1%
			TOTAL	1754		TOTAL	140	

SUMMARY TOTALS

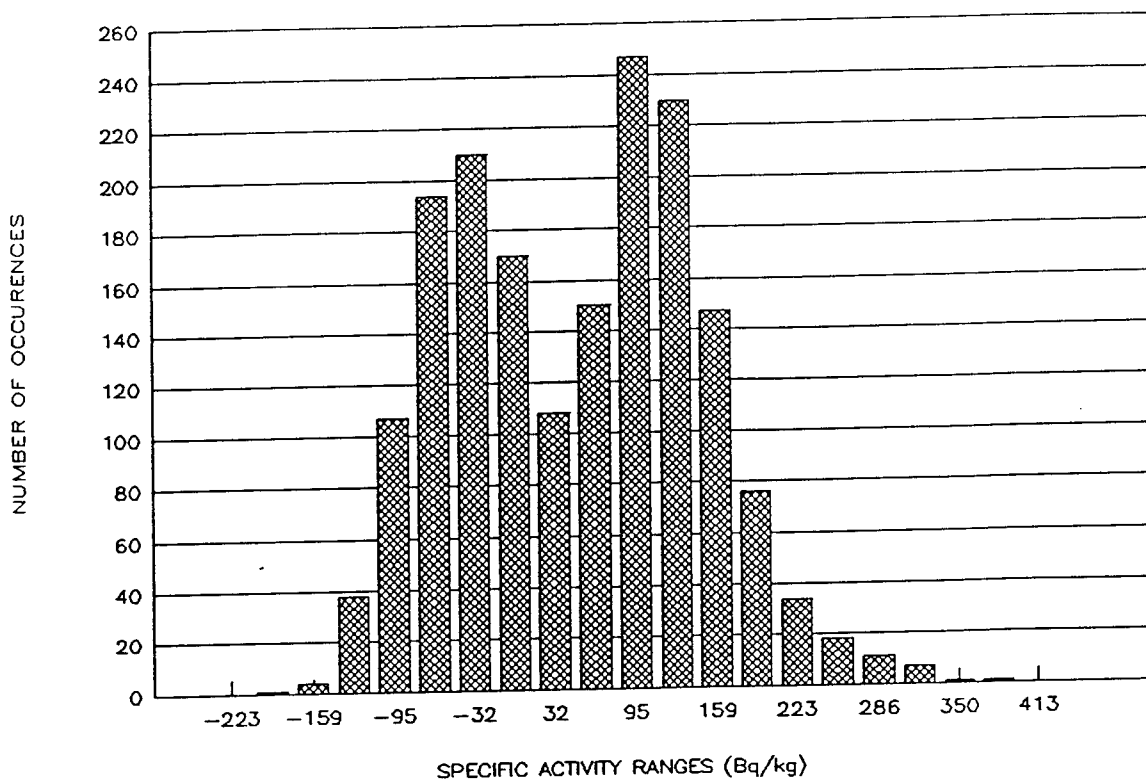
HOT PARTICLE EVENTS	146	SORTS BY ONE GATE ONLY	71
MULTIPARTICLE EVENTS	61	SORTS BY TWO GATES	69
DISTRIBUTED EVENTS	415		

REC CODE EXPLANATION

1.00 Source check (Soil on belt)
2.00 Empty belt
3.00 Test (No process soil)

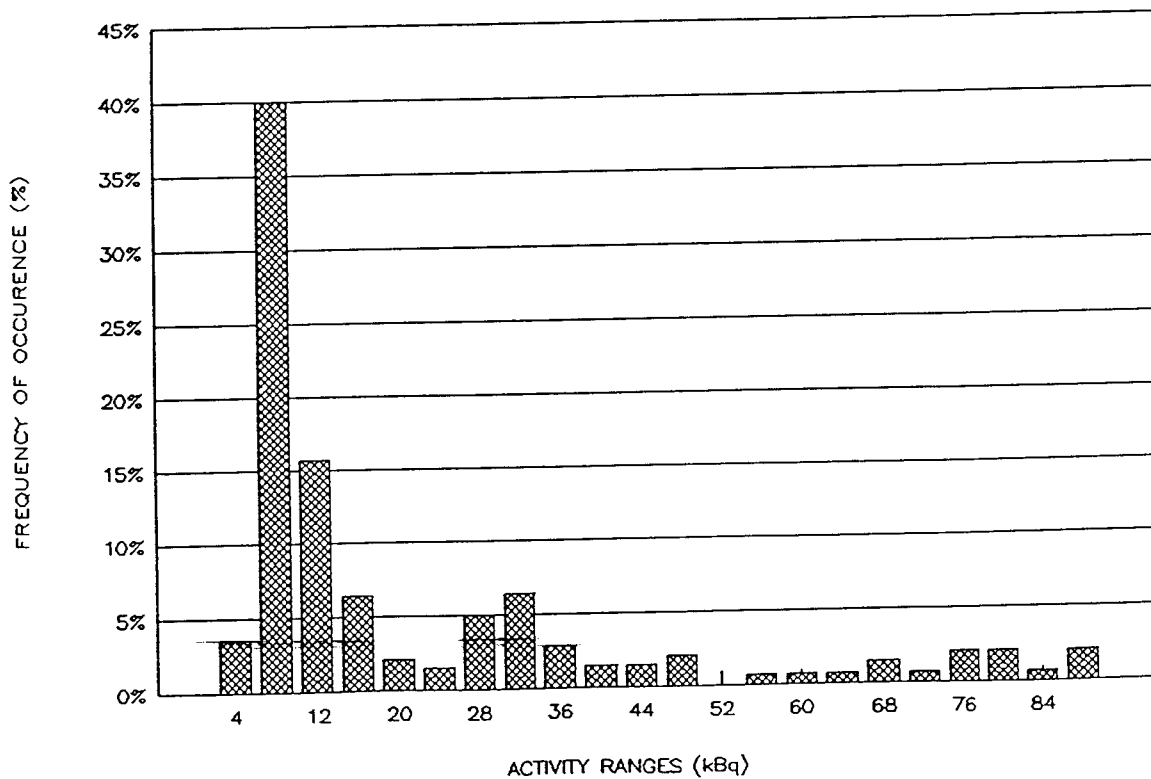
CLEAN SOIL SPECIFIC ACTIVITY

SORTER 2 LOG DATA FOR 22-Jun-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 22-Jun-93



JA SOIL CLEANUP PLANT LOG SUMMARY

SORTER 1 23-Jun-93

AVERAGE BACKGROUND COUNT RATE 0.72 ± 0.04 c/sec
 SORTER SOIL DENSITY 1.3 tons/m³
 GROUND SOIL DENSITY 1.65 tons/m³

	CONTAMINATED	CLEAN
MASS TOTAL	0.32 tons	113.3 tons
MAXIMUM/SORT	63.6 kg	60.5 kg
MINIMUM/SORT	0.8 kg	56.8 kg

		99.7%
WEIGHT RECOVERY OR VOLUME RECOVERY		
EQUIVALENT SOIL-IN-GROUND	0.25 yd ³	89.8 yd ³ 90.1 yd ³ /day

PARTICLE ACTIVITY (MAXIMUM ESTIMATE)

TOTAL	2,966 kBq
MAXIMUM/SORT	80 kBq
MINIMUM/SORT	3.1 kBq

	1,142 kBq	7,513 kBq
DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY		
MAXIMUM/SORT	45 kBq	16 kBq
MINIMUM/SORT	0 Bq	-8 kBq
SPECIFIC ACTIVITY	3,561 Bq/kg	66 Bq/kg

WORK HISTORY

WORK DAY START 05:00 AM
 PLANT START-UP 05:00 AM
 START SOIL PROCESSING 05:28 AM
 LUNCH START 11:30 AM

WORK DAY END 04:30 PM
 PLANT SHUT-DOWN 04:30 PM
 END SOIL PROCESSING 03:56 PM
 LUNCH PERIOD 0.0 hr

WORK HOURS	11.5 hr
AVAILABLE HOURS	11.5 hr
ACTUAL PROCESS HOURS (total 20-sec records)	10.43 hr
DOWN-TIME	1.07 hr
TOTAL SYSTEM PAUSE	0.03 hr
NONAVAILABLE HOURS	0.0 hr
START-UP	0.48 hr
SHUT-DOWN	0.56 hr
PLANT PERFORMANCE	90.7%
PRODUCTIVITY	90.7%

TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)

2,106

NONPROCESS RECORDS (Test, calibration, etc)

8

20-SEC PROCESS RECORDS

1,878

TOTAL SORT

1 MD>0 & MND=0

NO SORT

1,684 AD=0 & MD=0 & MND>0

SOME SORT

193 AD>0&0<MD<MNDmax&MND<MNDmax

UNEXPLAINED RECORDS

0

0<AD<1kBq & MD>0 0

UNEXPLAIN PAUSE

AD=0 & MD 0

TIME TIME

AD<0 & MD 0

06:18:55 06:16

ACT_P <5 kBq 43 18.9%

JA SOIL CLEANUP PLANT LOG SUMMARY

2-SEC COUNT PERIODS 18,780
 2-SEC RECORDS WITH SORTS 228 (ACT_P >0 kBq)
 2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR
 2 DETECTORS 48 94.1%
 3 DETECTORS 3 5.9%
 4 DETECTORS 0 0.0%
 5 DETECTORS 0 0.0%
 6 DETECTORS 0 0.0%
 7 DETECTORS 0 0.0%
 8 DETECTORS 0 0.0%
 TOTAL 51
 NET 2-SEC RECORDS WITH SORTS 177
 2-SEC PERIODS WITH NO SORTS 18,603
 AVG TIME BETWEEN 2-SEC SORTS 212.2 sec

1-GATE SORTS		116	ACT_ND	NUMBER	SPEC_A	ACT_P	SORT FREQ%		ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)		(kBq)
1	4	3.4%	-14000	0	-231	4000	12	5.3%	4
2	11	9.5%	-12000	0	-198	8000	112	49.1%	8
3	24	20.7%	-10000	0	-165	12000	45	19.7%	12
4	18	15.5%	-8000	3	-132	16000	17	7.5%	16
5	16	13.8%	-6000	3	-99	20000	10	4.4%	20
6	18	15.5%	-4000	6	-66	24000	3	1.3%	24
7	21	18.1%	-2000	30	-33	28000	3	1.3%	28
8	4	3.4%	0	131	0	32000	8	3.5%	32
TOTAL	116		2000	302	33	36000	1	0.4%	36
			4000	476	66	40000	0	0.0%	40
			6000	491	99	44000	1	0.4%	44
2-GATE SORTS		112	8000	306	132	48000	0	0.0%	48
DETECTR	SORTS	FREQ%	10000	110	165	52000	4	1.8%	52
8			12000	21	198	56000	3	1.3%	56
9	10	8.9%	14000	4	231	60000	2	0.9%	60
10	17	15.2%	16000	3	264	64000	0	0.0%	64
11	28	25.0%	18000	0	298	68000	4	1.8%	68
12	13	11.6%	20000	0	331	72000	1	0.4%	72
13	19	17.0%	22000	0	364	76000	1	0.4%	76
14	14	12.5%	24000	0	397	80000	0	0.0%	80
15	11	9.8%	26000	0	430	84000	1	0.4%	84
TOTAL	112		>28000	0	0	>84000	0	0.0%	>84
			TOTAL	1886		TOTAL	228		

SUMMARY TOTALS

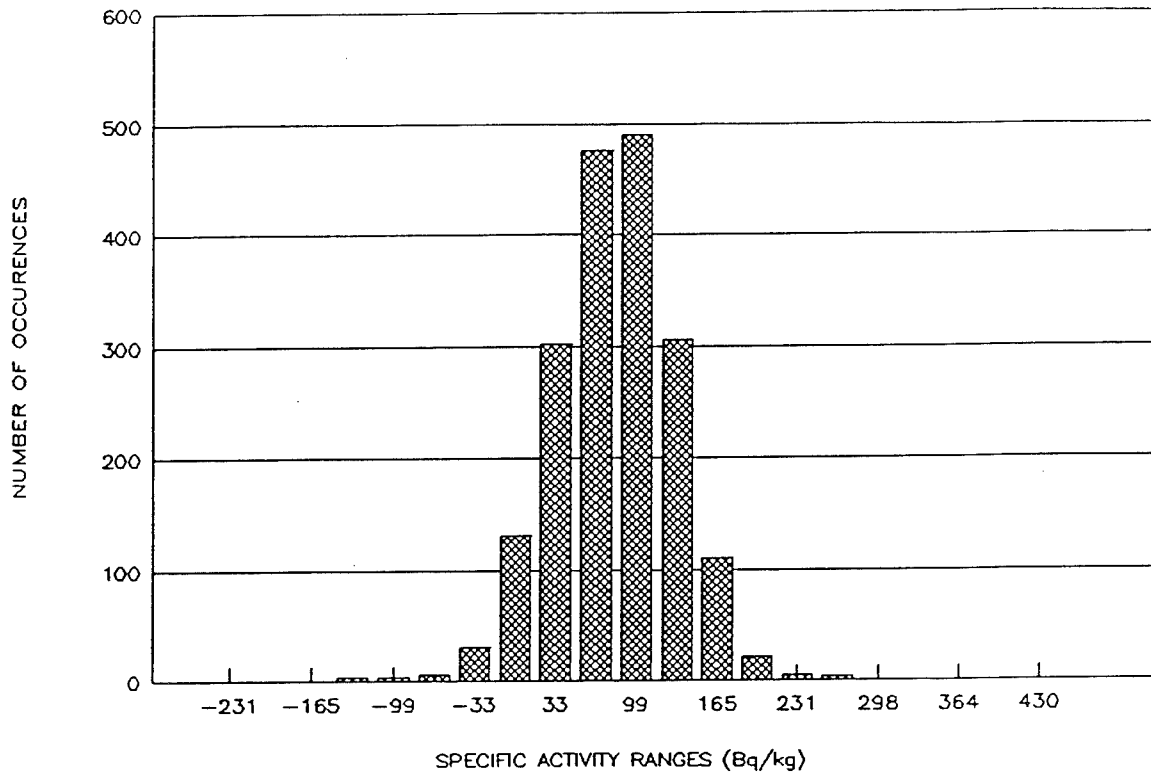
HOT PARTICLE EVENTS	238	SORTS BY ONE GATE ONLY	116
MULTIPARTICLE EVENTS	97	SORTS BY TWO GATES	112
DISTRIBUTED EVENTS	83		

REC CODE EXPLANATION

1.00 Source check (Soil on belt)
 2.00 Empty belt
 3.00 Test (No process soil)

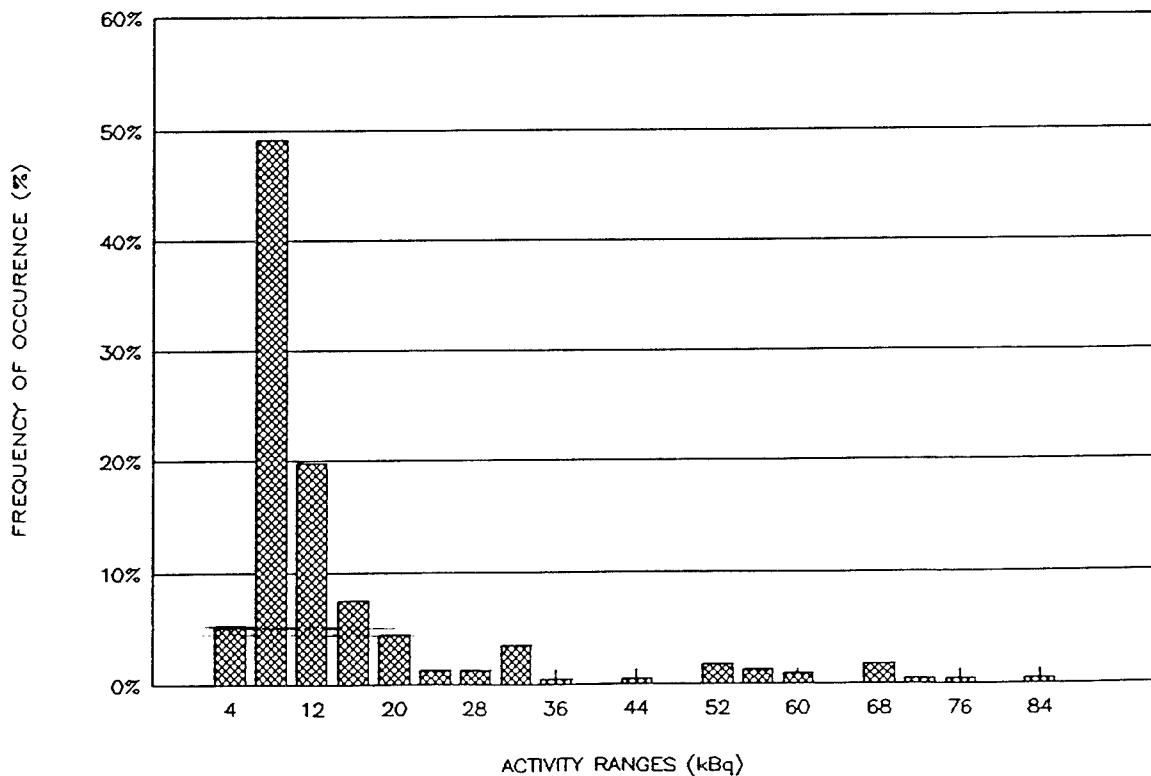
CLEAN SOIL SPECIFIC ACTIVITY

SORTER 1 LOG DATA FOR 23-Jun-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 23-Jun-93



JA SOIL CLEANUP PLANT LOG SUMMARY

SORTER 2 23-Jun-93

AVERAGE BACKGROUND COUNT RATE	0.79 ± 0.03 c/sec		
SORTER SOIL DENSITY	1.3 tons/m ³		
GROUND SOIL DENSITY	1.65 tons/m ³		
	CONTAMINATED	CLEAN	
MASS TOTAL	0.26 tons	113.4 tons	
MAXIMUM/SORT	63.6 kg	60.5 kg	
MINIMUM/SORT	0.8 kg	56.8 kg	
WEIGHT RECOVERY OR VOLUME RECOVERY			99.8%
EQUIVALENT SOIL-IN-GROUND	0.20 yd ³	89.9 yd ³	90.1 yd ³ /day
PARTICLE ACTIVITY (MAXIMUM ESTIMATE)			
TOTAL	2,811 kBq		
MAXIMUM/SORT	76 kBq		
MINIMUM/SORT	3.6 kBq		
DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY			
MAXIMUM/SORT	1,067 kBq	10,249 kBq	
MINIMUM/SORT	46 kBq	17 kBq	
SPECIFIC ACTIVITY	-402 Bq	-7 kBq	
	4,161 Bq/kg	90 Bq/kg	
WORK HISTORY			
WORK DAY START	05:00 AM	WORK DAY END	04:30 PM
PLANT START-UP	05:00 AM	PLANT SHUT-DOWN	04:30 PM
START SOIL PROCESSING	05:28 AM	END SOIL PROCESSING	03:56 PM
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 hr
WORK HOURS	11.5 hr		
AVAILABLE HOURS	11.5 hr		
ACTUAL PROCESS HOURS (total 20-sec records)	10.43 hr		
DOWN-TIME	1.07 hr		
TOTAL SYSTEM PAUSE	0.03 hr		
NONAVAILABLE HOURS	0.0 hr		
START-UP	0.48 hr		
SHUT-DOWN	0.56 hr		
PLANT PERFORMANCE	90.7%		
PRODUCTIVITY	90.7%		
TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)	2,049		
NONPROCESS RECORDS (Test, calibration, etc)	8		
20-SEC PROCESS RECORDS	1,878		
TOTAL SORT	1 MD>0 & MND=0		
NO SORT	1,729 AD=0 & MD=0 & MND>0		
SOME SORT	147 AD>0&0<MD<MNDmax&MND<MNDmax		
UNEXPLAINED RECORDS	1		
0<AD<1kBq & MD>0		UNEXPLAIN	PAUSE
AD=0 & MD	0	TIME	TIME
AD<0 & MD	1	06:19:36	06:16
ACT_P <5 kBq	29 17.0%		

JA SOIL CLEANUP PLANT LOG SUMMARY

2-SEC COUNT PERIODS 18,780
 2-SEC RECORDS WITH SORTS 171 (ACT_P >0 kBq)
 2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR
 2 DETECTORS 39 78.0%
 3 DETECTORS 9 18.0%
 4 DETECTORS 1 2.0%
 5 DETECTORS 1 2.0%
 6 DETECTORS 0 0.0%
 7 DETECTORS 0 0.0%
 8 DETECTORS 0 0.0%
 TOTAL 50
 NET 2-SEC RECORDS WITH SORTS 121
 2-SEC PERIODS WITH NO SORTS 18,659
 AVG TIME BETWEEN 2-SEC SORTS 310.4 sec

1-GATE SORTS		92	ACT_NO	NUMBER	SPEC_A	ACT_P	SORT FREQ%		ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)		(kBq)
1	2	2.2%	-14000	0	-231	4000	9	5.3%	4
2	14	15.2%	-12000	0	-198	8000	66	38.6%	8
3	18	19.6%	-10000	0	-165	12000	31	18.1%	12
4	14	15.2%	-8000	0	-132	16000	17	9.9%	16
5	18	19.6%	-6000	3	-99	20000	4	2.3%	20
6	16	17.4%	-4000	6	-66	24000	13	7.6%	24
7	9	9.8%	-2000	3	-33	28000	2	1.2%	28
8	1	1.1%	0	54	0	32000	4	2.3%	32
TOTAL	92		2000	148	33	36000	3	1.8%	36
			4000	370	66	40000	4	2.3%	40
2-GATE SORTS		79	6000	512	99	44000	2	1.2%	44
DETECTR	SORTS	FREQ%	8000	433	132	48000	1	0.6%	48
8			10000	251	165	52000	0	0.0%	52
9	6	7.6%	12000	84	198	56000	3	1.8%	56
10	10	12.7%	14000	17	231	60000	3	1.8%	60
11	16	20.3%	16000	3	264	64000	3	1.8%	64
12	18	22.8%	18000	2	298	68000	2	1.2%	68
13	17	21.5%	20000	0	331	72000	3	1.8%	72
14	10	12.7%	22000	0	364	76000	0	0.0%	76
15	2	2.5%	24000	0	397	80000	1	0.6%	80
TOTAL	79		26000	0	430	84000	0	0.0%	84
			>28000	0	0	>84000	0	0.0%	>84
			TOTAL	1886		TOTAL	171		

SUMMARY TOTALS

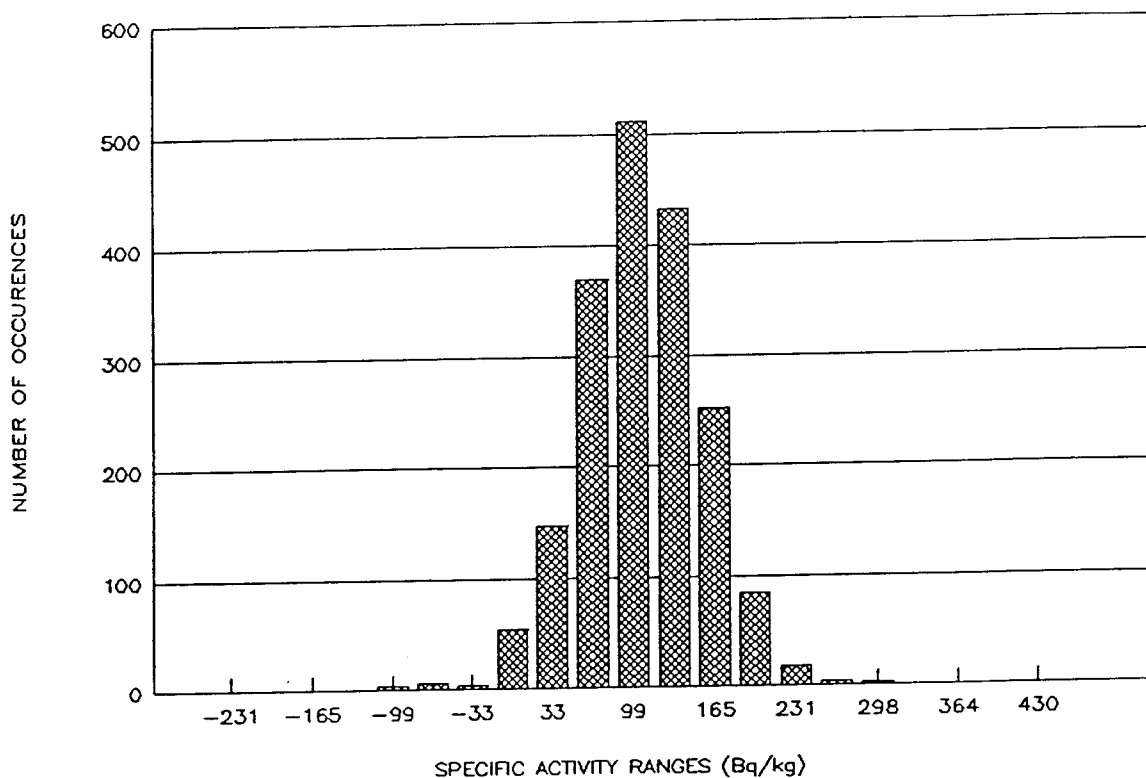
HOT PARTICLE EVENTS	164	SORTS BY ONE GATE ONLY	92
MULTIPARTICLE EVENTS	86	SORTS BY TWO GATES	79
DISTRIBUTED EVENTS	83		

REC CODE EXPLANATION

1.00 Source check (Soil on belt)
 2.00 Empty belt
 3.00 Test (No process soil)

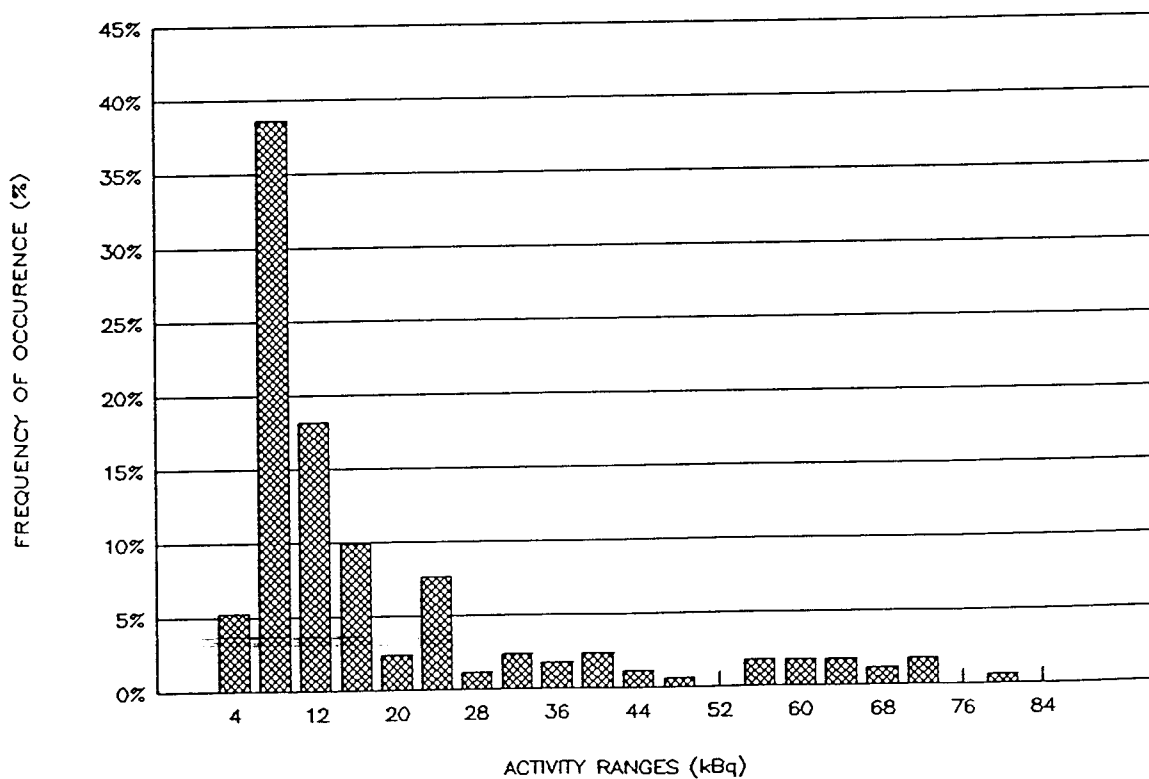
CLEAN SOIL SPECIFIC ACTIVITY

SORTER 2 LOG DATA FOR 23-Jun-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 23-Jun-93



SORTER 1

24-Jun-93

AVERAGE BACKGROUND COUNT RATE

0.71 ± 0.03 c/sec

SORTER SOIL DENSITY

1.25 tons/m³

GROUND SOIL DENSITY

1.65 tons/m³

MASS TOTAL

CONTAMINATED

CLEAN

0.24 tons

109.4 tons

MAXIMUM/SORT

4.4 kg

58.2 kg

MINIMUM/SORT

0.7 kg

53.9 kg

WEIGHT RECOVERY OR VOLUME RECOVERY

99.8%

EQUIVALENT SOIL-IN-GROUND

0.19 yd³86.7 yd³86.9 yd³/day

PARTICLE ACTIVITY (MAXIMUM ESTIMATE)

TOTAL

7,916 kBq

MAXIMUM/SORT

1,007 kBq

MINIMUM/SORT

3.2 kBq

DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY

2,495 kBq

7,188 kBq

MAXIMUM/SORT

633 kBq

14 kBq

MINIMUM/SORT

0 Bq

-11 kBq

SPECIFIC ACTIVITY

10,351 Bq/kg

66 Bq/kg

WORK HISTORY

WORK DAY START

05:00 AM

WORK DAY END

04:30 PM

PLANT START-UP

05:00 AM

PLANT SHUT-DOWN

04:30 PM

START SOIL PROCESSING

05:31 AM

END SOIL PROCESSING

04:01 PM

LUNCH START

11:30 AM

LUNCH PERIOD

0.0 hr

WORK HOURS

11.5 hr

AVAILABLE HOURS

11.5 hr

ACTUAL PROCESS HOURS (total 20-sec records)

10.46 hr

DOWN-TIME

1.04 hr

TOTAL SYSTEM PAUSE

0.01 hr

NONAVAILABLE HOURS

0.0 hr

START-UP

0.53 hr

SHUT-DOWN

0.47 hr

PLANT PERFORMANCE

91.0%

PRODUCTIVITY

91.0%

TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)

2,109

NONPROCESS RECORDS (Test, calibration, etc)

7

20-SEC PROCESS RECORDS

1,883

TOTAL SORT

0 MD>0 & MND=0

NO SORT

1,702 AD=0 & MD=0 & MND>0

SOME SORT

181 AD>0&0<MD<MNDmax&MND<MNDmax

UNEXPLAINED RECORDS

0

0<AD<1kBq & MD>0

1

UNEXPLAIN

PAUSE

AD=0 & MD

0

TIME

TIME

AD<0 & MD

0

11:33:06

07:07

ACT_P <5 kBq

40

17.7%

File S1JA0624.WR1

1

Printed on 06/25/93 at 09:43:55 AM

2-SEC COUNT PERIODS 18,830
 2-SEC RECORDS WITH SORTS 226 (ACT_P >0 kBq)
 2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR
 2 DETECTORS 64 78.0%
 3 DETECTORS 14 17.1%
 4 DETECTORS 3 3.7%
 5 DETECTORS 1 1.2%
 6 DETECTORS 0 0.0%
 7 DETECTORS 0 0.0%
 8 DETECTORS 0 0.0%
 TOTAL 82
 NET 2-SEC RECORDS WITH SORTS 144
 2-SEC PERIODS WITH NO SORTS 18,686
 AVG TIME BETWEEN 2-SEC SORTS 261.5 sec

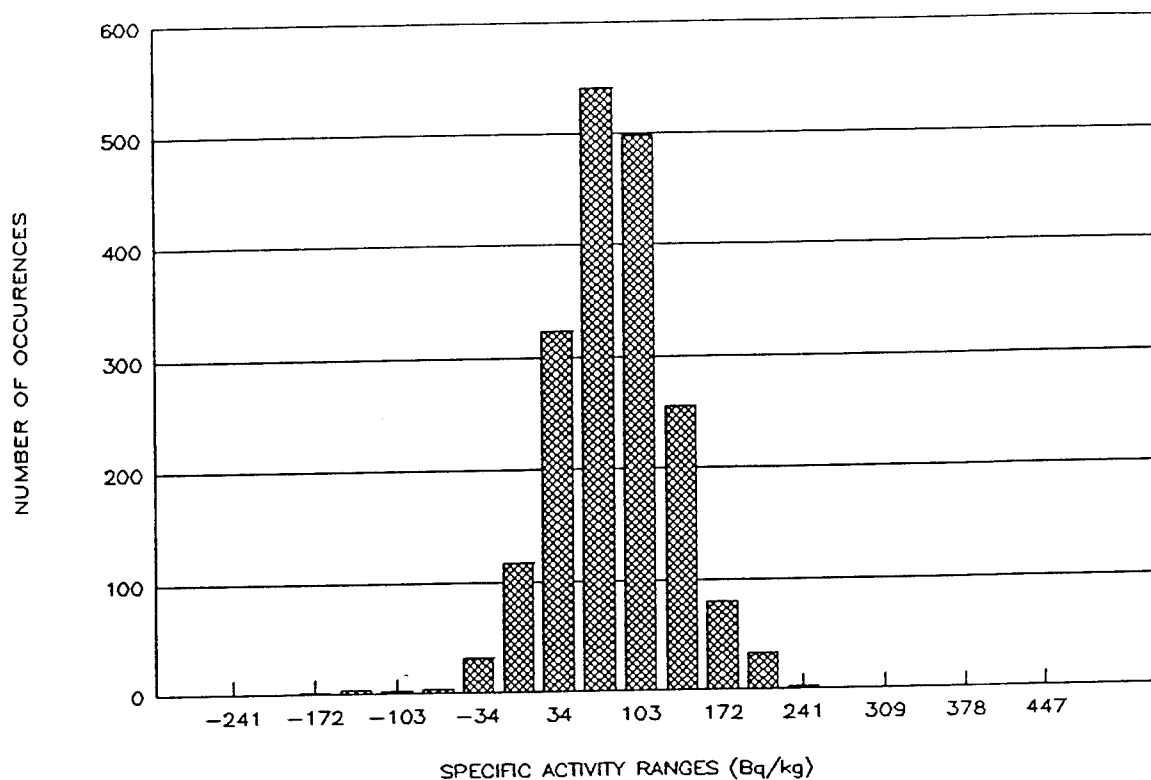
1-GATE SORTS		112	ACT_ND	NUMBER	SPEC_A	ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)		(kBq)
1	3	2.7%	-14000	0	-241	4000	14	6.2%	4
2	12	10.7%	-12000	0	-206	8000	82	36.3%	8
3	14	12.5%	-10000	1	-172	12000	29	12.8%	12
4	21	18.8%	-8000	3	-137	16000	25	11.1%	16
5	20	17.9%	-6000	2	-103	20000	14	6.2%	20
6	23	20.5%	-4000	3	-69	24000	5	2.2%	24
7	14	12.5%	-2000	32	-34	28000	6	2.7%	28
8	5	4.5%	0	117	0	32000	6	2.7%	32
TOTAL	112		2000	323	34	36000	4	1.8%	36
			4000	541	69	40000	6	2.7%	40
			6000	498	103	44000	5	2.2%	44
2-GATE SORTS		114	8000	255	137	48000	4	1.8%	48
DETECTR	SORTS	FREQ%							
8			10000	80	172	52000	2	0.9%	52
9	10	8.8%	12000	33	206	56000	1	0.4%	56
10	13	11.4%	14000	2	241	60000	1	0.4%	60
11	14	12.3%	16000	0	275	64000	5	2.2%	64
12	23	20.2%	18000	0	309	68000	2	0.9%	68
13	24	21.1%	20000	0	344	72000	3	1.3%	72
14	22	19.3%	22000	0	378	76000	0	0.0%	76
15	8	7.0%	24000	0	412	80000	0	0.0%	80
TOTAL	114		26000	0	447	84000	1	0.4%	84
			>28000	0	0	>84000	11	4.9%	>84
			TOTAL	1890		TOTAL	226		
SUMMARY TOTALS									
HOT PARTICLE EVENTS			223	SORTS BY ONE GATE ONLY			112		
MULTIPARTICLE EVENTS			108	SORTS BY TWO GATES			114		
DISTRIBUTED EVENTS			0						

REC CODE EXPLANATION

1.00 Source check (Soil on belt)
 2.00 Empty belt
 3.00 Test (No process soil)

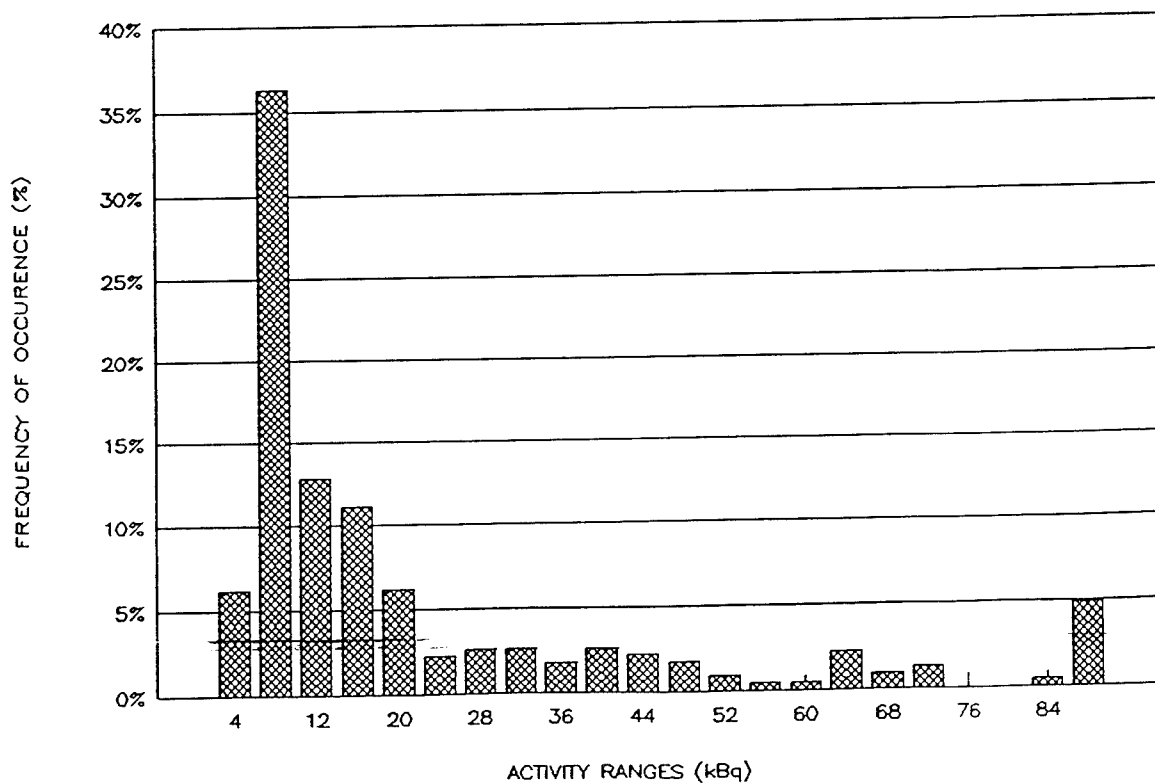
CLEAN SOIL SPECIFIC ACTIVITY

SORTER 1 LOG DATA FOR 24-Jun-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 24-Jun-93



JA SOIL CLEANUP PLANT LOG SUMMARY

SORTER 2 24-Jun-93

AVERAGE BACKGROUND COUNT RATE 0.79 ± 0.03 c/sec
 SORTER SOIL DENSITY 1.25 tons/m³
 GROUND SOIL DENSITY 1.65 tons/m³

	CONTAMINATED	CLEAN
MASS TOTAL	0.31 tons	107.3 tons
MAXIMUM/SORT	61.1 kg	58.2 kg
MINIMUM/SORT	0.7 kg	53.9 kg

WEIGHT RECOVERY OR VOLUME RECOVERY		99.7%
EQUIVALENT SOIL-IN-GROUND	0.25 yd ³	85.1 yd ³ 85.3 yd ³ /day

PARTICLE ACTIVITY (MAXIMUM ESTIMATE)

TOTAL	3,483 kBq
MAXIMUM/SORT	103 kBq
MINIMUM/SORT	3.7 kBq

DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY	1,205 kBq	9,246 kBq
MAXIMUM/SORT	59 kBq	17 kBq
MINIMUM/SORT	-447 Bq	-9 kBq
SPECIFIC ACTIVITY	3,892 Bq/kg	86 Bq/kg

WORK HISTORY

WORK DAY START	05:00 AM	WORK DAY END	04:30 PM
PLANT START-UP	05:00 AM	PLANT SHUT-DOWN	04:30 PM
START SOIL PROCESSING	05:31 AM	END SOIL PROCESSING	04:05 PM
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 hr

WORK HOURS	11.5 hr
AVAILABLE HOURS	11.5 hr
ACTUAL PROCESS HOURS (total 20-sec records)	10.27 hr
DOWN-TIME	1.23 hr
TOTAL SYSTEM PAUSE	0.23 hr
NONAVAILABLE HOURS	0.0 hr
START-UP	0.53 hr
SHUT-DOWN	0.41 hr
PLANT PERFORMANCE	89.3%
PRODUCTIVITY	89.3%

TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)	2,016
NONPROCESS RECORDS (Test, calibration, etc)	18

20-SEC PROCESS RECORDS	1,849
TOTAL SORT	2 MD>0 & MND=0
NO SORT	1,705 AD=0 & MD=0 & MND>0
SOME SORT	142 AD>0&0<MD<MNDmax&MND<MNDmax
UNEXPLAINED RECORDS	0

		UNEXPLAIN	PAUSE
		TIME	TIME
0<AD<1kBq & MD>0	2	07:39:47	07:07
AD=0 & MD	0	13:52:34	12:24
AD<0 & MD	1		
ACT_P <5 kBq	22 13.2%		

JA SOIL CLEANUP PLANT LOG SUMMARY

2-SEC COUNT PERIODS

18,490

16:04:54

13:44

2-SEC RECORDS WITH SORTS

167 (ACT_P > 0 kBq)

2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR

2 DETECTORS	36	92.3%
3 DETECTORS	3	7.7%
4 DETECTORS	0	0.0%
5 DETECTORS	0	0.0%
6 DETECTORS	0	0.0%
7 DETECTORS	0	0.0%
8 DETECTORS	0	0.0%

TOTAL 39

NET 2-SEC RECORDS WITH SORTS

128

2-SEC PERIODS WITH NO SORTS

18,362

AVG TIME BETWEEN 2-SEC SORTS

288.9 sec

1-GATE SORTS	84	ACT_NO	NUMBER	SPEC_A	ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)	(kBq)
1	3	3.6%	-14000	0	-241	4000	4	2.4%
2	12	14.3%	-12000	0	-206	8000	63	37.7%
3	16	19.0%	-10000	2	-172	12000	21	12.6%
4	18	21.4%	-8000	3	-137	16000	14	8.4%
5	13	15.5%	-6000	7	-103	20000	10	6.0%
6	12	14.3%	-4000	3	-69	24000	8	4.8%
7	8	9.5%	-2000	24	-34	28000	7	4.2%
8	2	2.4%	0	58	0	32000	4	2.4%
TOTAL	84		2000	184	34	36000	8	4.8%
			4000	426	69	40000	5	3.0%
2-GATE SORTS	83	6000	508	103	44000	1	0.6%	44
DETECTR	SORTS	FREQ%	8000	379	137	48000	1	0.6%
8			10000	183	172	52000	1	0.6%
9	10	12.0%	12000	61	206	56000	3	1.8%
10	11	13.3%	14000	22	241	60000	2	1.2%
11	18	21.7%	16000	5	275	64000	0	0.0%
12	16	19.3%	18000	2	309	68000	2	1.2%
13	12	14.5%	20000	0	344	72000	6	3.6%
14	11	13.3%	22000	0	378	76000	1	0.6%
15	5	6.0%	24000	0	412	80000	1	0.6%
TOTAL	83		26000	0	447	84000	2	1.2%
			>28000	0	0	>84000	3	1.8%
			TOTAL	1867		TOTAL	167	

SUMMARY TOTALS

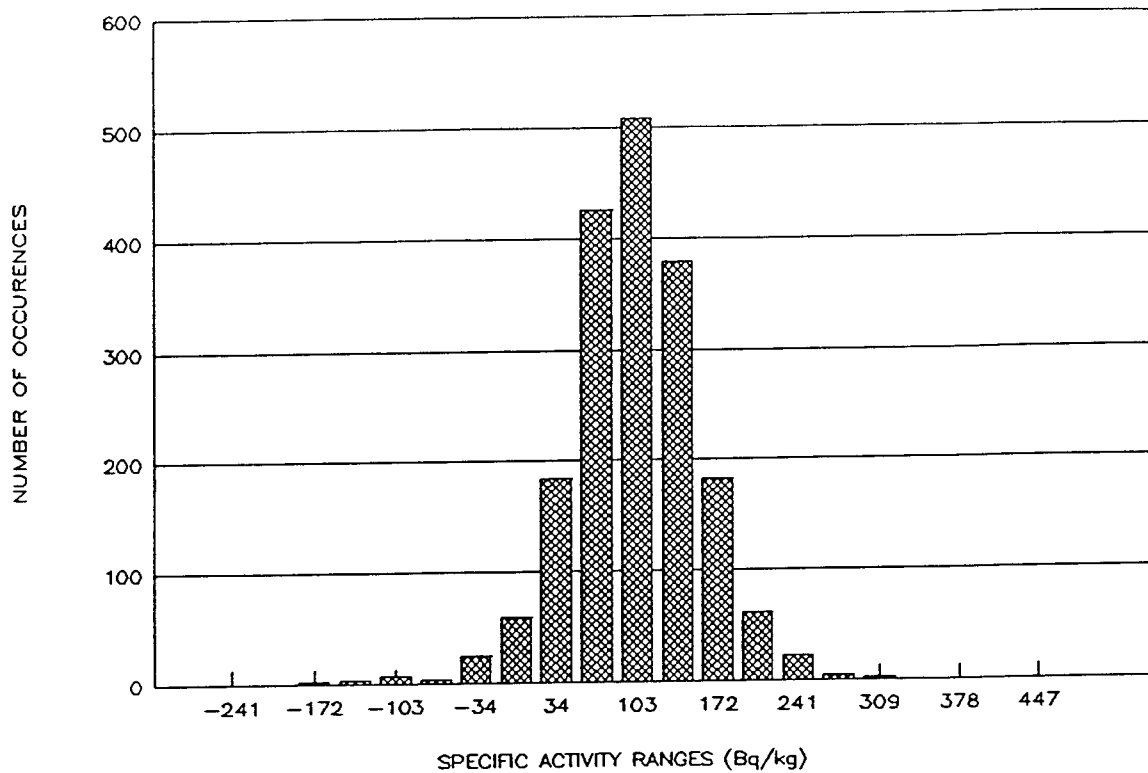
HOT PARTICLE EVENTS	164	SORTS BY ONE GATE ONLY	84
MULTIPARTICLE EVENTS	93	SORTS BY TWO GATES	83
DISTRIBUTED EVENTS	166		

REC CODE EXPLANATION

1.00 Source check (Soil on belt)
 2.00 Empty belt
 3.00 Test (No process soil)

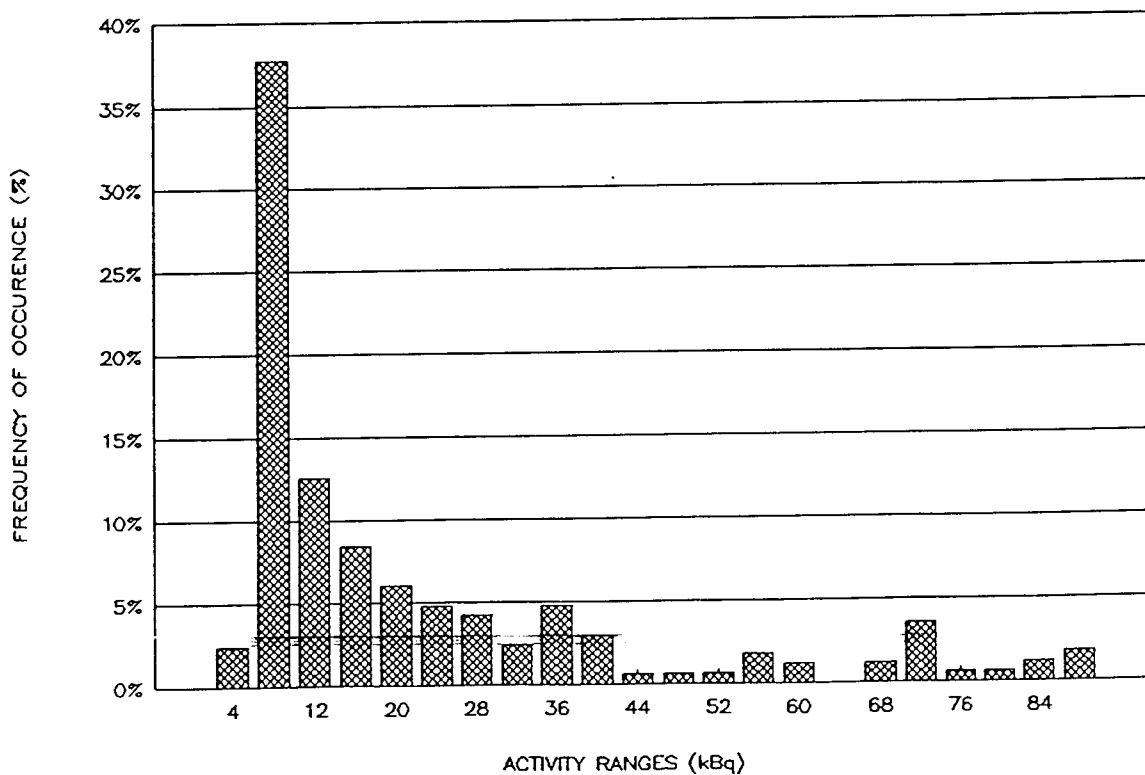
CLEAN SOIL SPECIFIC ACTIVITY

SORTER 2 LOG DATA FOR 24-Jun-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 24-Jun-93



JA SOIL CLEANUP PLANT LOG SUMMARY

SORTER 1 25-Jun-93

AVERAGE BACKGROUND COUNT RATE	0.73 ± 0.04 c/sec		
SORTER SOIL DENSITY	1.25 tons/m ³		
GROUND SOIL DENSITY	1.65 tons/m ³		
		CONTAMINATED	CLEAN
MASS TOTAL		0.28 tons	101.5 tons
MAXIMUM/SORT		61.1 kg	58.2 kg
MINIMUM/SORT		0.7 kg	54.6 kg
WEIGHT RECOVERY OR VOLUME RECOVERY			99.7%
EQUIVALENT SOIL-IN-GROUND	0.22 yd ³	80.4 yd ³	80.7 yd ³ /day

PARTICLE ACTIVITY (MAXIMUM ESTIMATE)

TOTAL	3,266 kBq
MAXIMUM/SORT	146 kBq
MINIMUM/SORT	3.2 kBq

DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY

	1,161 kBq	6,631 kBq
MAXIMUM/SORT	81 kBq	13 kBq
MINIMUM/SORT	0 Bq	-10 kBq
SPECIFIC ACTIVITY	4,097 Bq/kg	65 Bq/kg

WORK HISTORY

WORK DAY START	05:00 AM	WORK DAY END	04:30 PM
PLANT START-UP	05:00 AM	PLANT SHUT-DOWN	03:30 PM
START SOIL PROCESSING	05:25 AM	END SOIL PROCESSING	03:08 PM
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 hr

WORK HOURS	11.5 hr
AVAILABLE HOURS	10.5 hr
ACTUAL PROCESS HOURS (total 20-sec records)	9.71 hr
DOWN-TIME	0.79 hr
TOTAL SYSTEM PAUSE	0.01 hr
NONAVAILABLE HOURS	1.0 hr
START-UP	0.43 hr
SHUT-DOWN	0.36 hr
PLANT PERFORMANCE	92.5%
PRODUCTIVITY	84.4%

TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 1,939

NONPROCESS RECORDS (Test, calibration, etc) 3

20-SEC PROCESS RECORDS

TOTAL SORT	1,748	1 MD>0 & MND=0
NO SORT	1,577	AD=0 & MD=0 & MND>0
SOME SORT	170	AD>0&0<MD<MNDmax&MND<MNDmax
UNEXPLAINED RECORDS	0	

0<AD<1kBq & MD>0	2	UNEXPLAIN	PAUSE
AD=0 & MD	1	TIME	TIME
AD<0 & MD	0	06:45:42	14:26
ACT_P <5 kBq	41	21.5%	10:51:22

JA SOIL CLEANUP PLANT LOG SUMMARY

2-SEC COUNT PERIODS

17,480

14:27:20

2-SEC RECORDS WITH SORTS

191 (ACT_P >0 kBq)

2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR

2 DETECTORS	46	92.0%
3 DETECTORS	4	8.0%
4 DETECTORS	0	0.0%
5 DETECTORS	0	0.0%
6 DETECTORS	0	0.0%
7 DETECTORS	0	0.0%
8 DETECTORS	0	0.0%

TOTAL 50

NET 2-SEC RECORDS WITH SORTS

141

2-SEC PERIODS WITH NO SORTS

17,339

AVG TIME BETWEEN 2-SEC SORTS

247.9 sec

1-GATE SORTS	85	ACT_ND	NUMBER	SPEC_A	ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)	(kBq)
1	0	0.0%	-14000	0	-241	4000	7	3.7%
2	7	8.2%	-12000	0	-206	8000	79	41.4%
3	19	22.4%	-10000	1	-172	12000	35	18.3%
4	18	21.2%	-8000	5	-137	16000	16	8.4%
5	16	18.8%	-6000	11	-103	20000	11	5.8%
6	13	15.3%	-4000	12	-69	24000	7	3.7%
7	8	9.4%	-2000	31	-34	28000	2	1.0%
8	4	4.7%	0	122	0	32000	4	2.1%
TOTAL	85		2000	286	34	36000	5	2.6%
			4000	469	69	40000	1	0.5%
			6000	406	103	44000	2	1.0%
2-GATE SORTS	106		8000	259	137	48000	4	2.1%
DETECTR	SORTS	FREQ%	10000	108	172	52000	4	2.1%
8			12000	36	206	56000	2	1.0%
9	4	3.8%	14000	5	241	60000	1	0.5%
10	15	14.2%	16000	0	275	64000	0	0.0%
11	22	20.8%	18000	0	309	68000	1	0.5%
12	18	17.0%	20000	0	344	72000	6	3.1%
13	20	18.9%	22000	0	378	76000	0	0.0%
14	15	14.2%	24000	0	412	80000	1	0.5%
15	12	11.3%	26000	0	447	84000	0	0.0%
TOTAL	106		>28000	0	0	>84000	3	1.6%
			TOTAL	1751		TOTAL	191	

SUMMARY TOTALS

HOT PARTICLE EVENTS	203
MULTIPARTICLE EVENTS	102
DISTRIBUTED EVENTS	83

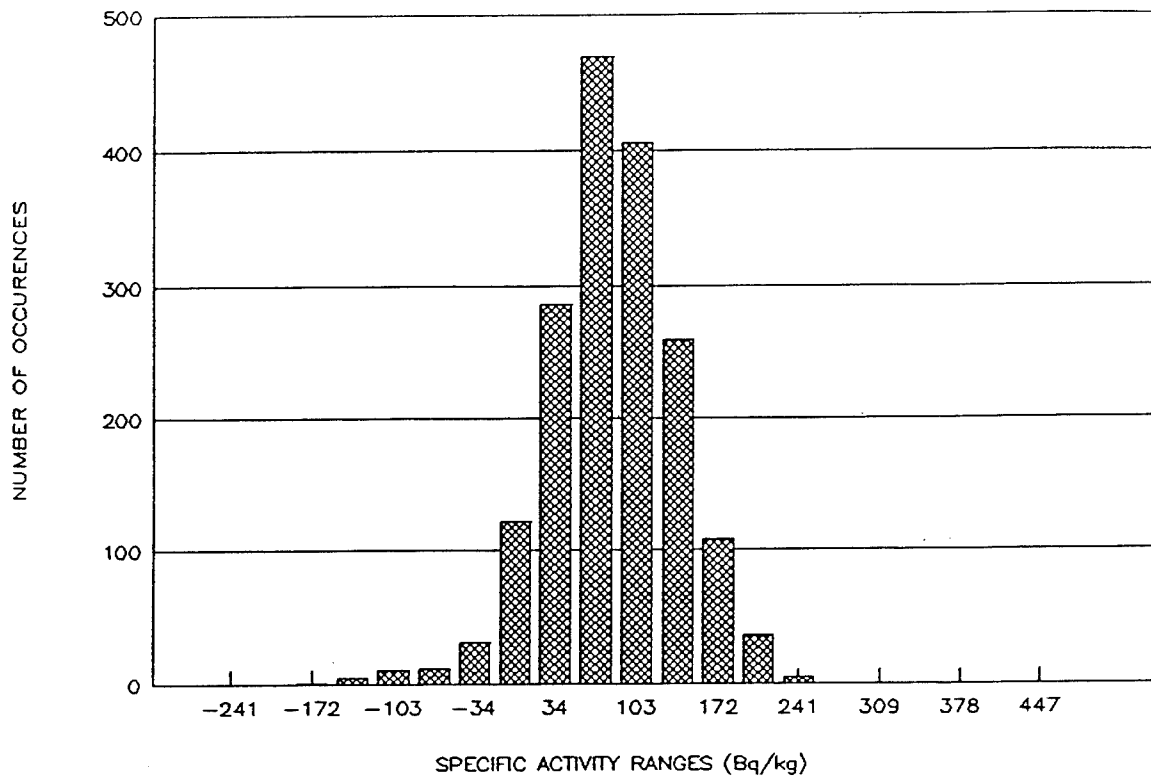
SORTS BY ONE GATE ONLY	85
SORTS BY TWO GATES	106

REC CODE EXPLANATION

1.00 Source check (Soil on belt)
 2.00 Empty belt
 3.00 Test (No process soil)

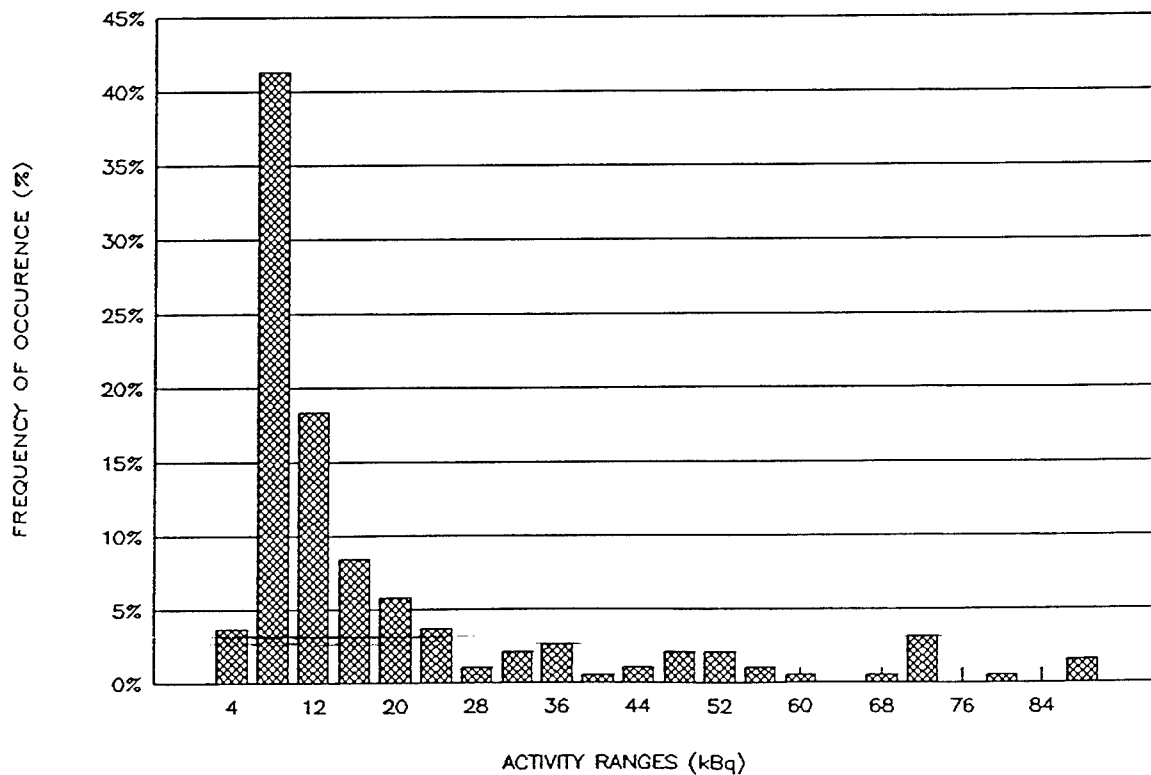
CLEAN SOIL SPECIFIC ACTIVITY

SORTER 1 LOG DATA FOR 25-Jun-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 25-Jun-93



JA SOIL CLEANUP PLANT LOG SUMMARY

SORTER 2 25-Jun-93

AVERAGE BACKGROUND COUNT RATE 0.79 ± 0.02 c/sec
 SORTER SOIL DENSITY 1.25 tons/m³
 GROUND SOIL DENSITY 1.65 tons/m³

	CONTAMINATED	CLEAN
MASS TOTAL	0.47 tons	74.2 tons
MAXIMUM/SORT	61.1 kg	58.2 kg
MINIMUM/SORT	0.7 kg	53.9 kg

WEIGHT RECOVERY OR VOLUME RECOVERY		99.4%
EQUIVALENT SOIL-IN-GROUND	0.38 yd ³	58.8 yd ³ 59.2 yd ³ /day

PARTICLE ACTIVITY (MAXIMUM ESTIMATE)

TOTAL	4,932 kBq
MAXIMUM/SORT	471 kBq
MINIMUM/SORT	2.8 kBq

DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY	1,574 kBq	6,168 kBq
MAXIMUM/SORT	226 kBq	18 kBq
MINIMUM/SORT	-2227 Bq	-4 kBq
SPECIFIC ACTIVITY	3,321 Bq/kg	83 Bq/kg

WORK HISTORY

WORK DAY START	05:00 AM	WORK DAY END	04:30 PM
PLANT START-UP	05:00 AM	PLANT SHUT-DOWN	03:30 PM
START SOIL PROCESSING	05:26 AM	END SOIL PROCESSING	03:06 PM
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 hr

WORK HOURS	11.5 hr
AVAILABLE HOURS	10.5 hr
ACTUAL PROCESS HOURS (total 20-sec records)	7.13 hr
DOWN-TIME	3.37 hr
TOTAL SYSTEM PAUSE	2.58 hr
NONAVAILABLE HOURS	1.0 hr
START-UP	0.44 hr
SHUT-DOWN	0.39 hr
PLANT PERFORMANCE	67.9%
PRODUCTIVITY	62.0%

TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 1,442
 NONPROCESS RECORDS (Test, calibration, etc) 3

20-SEC PROCESS RECORDS	1,283
TOTAL SORT	5 MD>0 & MND=0
NO SORT	1,156 AD=0 & MD=0 & MND>0
SOME SORT	122 AD>0&0<MD<MNDmax&MND<MNDmax
UNEXPLAINED RECORDS	0

0<AD<1kBq & MD>0	1	UNEXPLAIN	PAUSE
AD=0 & MD	4	TIME	TIME
AD<0 & MD	1	10:00:42	11:45
ACT_P <5 kBq	18 11.3%	11:46:58	12:32

JA SOIL CLEANUP PLANT LOG SUMMARY

2-SEC COUNT PERIODS	12,830	12:58:49	12:36
2-SEC RECORDS WITH SORTS	159 (ACT_P > 0 kBq)	14:11:04	12:59
2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR		14:27:20	14:11
2 DETECTORS	39 78.0%	15:06:32	14:27
3 DETECTORS	8 16.0%		
4 DETECTORS	3 6.0%		
5 DETECTORS	0 0.0%		
6 DETECTORS	0 0.0%		
7 DETECTORS	0 0.0%		
8 DETECTORS	0 0.0%		
TOTAL	50		
NET 2-SEC RECORDS WITH SORTS	109		
2-SEC PERIODS WITH NO SORTS	12,721		
AVG TIME BETWEEN 2-SEC SORTS	235.4 sec		

1-GATE SORTS	81	ACT_NO	NUMBER	SPEC_A	ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#) (Bq/kg)	(Bq)	(#)		(kBq)
1	3	3.7%	-14000	0	-241	4000	4 2.5%	4
2	17	21.0%	-12000	0	-206	8000	55 34.6%	8
3	12	14.8%	-10000	0	-172	12000	29 18.2%	12
4	11	13.6%	-8000	0	-137	16000	13 8.2%	16
5	14	17.3%	-6000	0	-103	20000	8 5.0%	20
6	10	12.3%	-4000	2	-69	24000	4 2.5%	24
7	12	14.8%	-2000	12	-34	28000	2 1.3%	28
8	2	2.5%	0	53	0	32000	2 1.3%	32
TOTAL	81		2000	162	34	36000	5 3.1%	36
			4000	288	69	40000	6 3.8%	40
2-GATE SORTS	78		6000	335	103	44000	4 2.5%	44
DETECTR	SORTS	FREQ%	8000	263	137	48000	4 2.5%	48
8			10000	118	172	52000	4 2.5%	52
9	7	9.0%	12000	41	206	56000	0 0.0%	56
10	11	14.1%	14000	10	241	60000	4 2.5%	60
11	11	14.1%	16000	1	275	64000	0 0.0%	64
12	16	20.5%	18000	1	309	68000	2 1.3%	68
13	12	15.4%	20000	0	344	72000	0 0.0%	72
14	14	17.9%	22000	0	378	76000	3 1.9%	76
15	7	9.0%	24000	0	412	80000	0 0.0%	80
TOTAL	78		26000	0	447	84000	1 0.6%	84
			>28000	0	0	>84000	9 5.7%	>84
			TOTAL	1286		TOTAL	159	

SUMMARY TOTALS

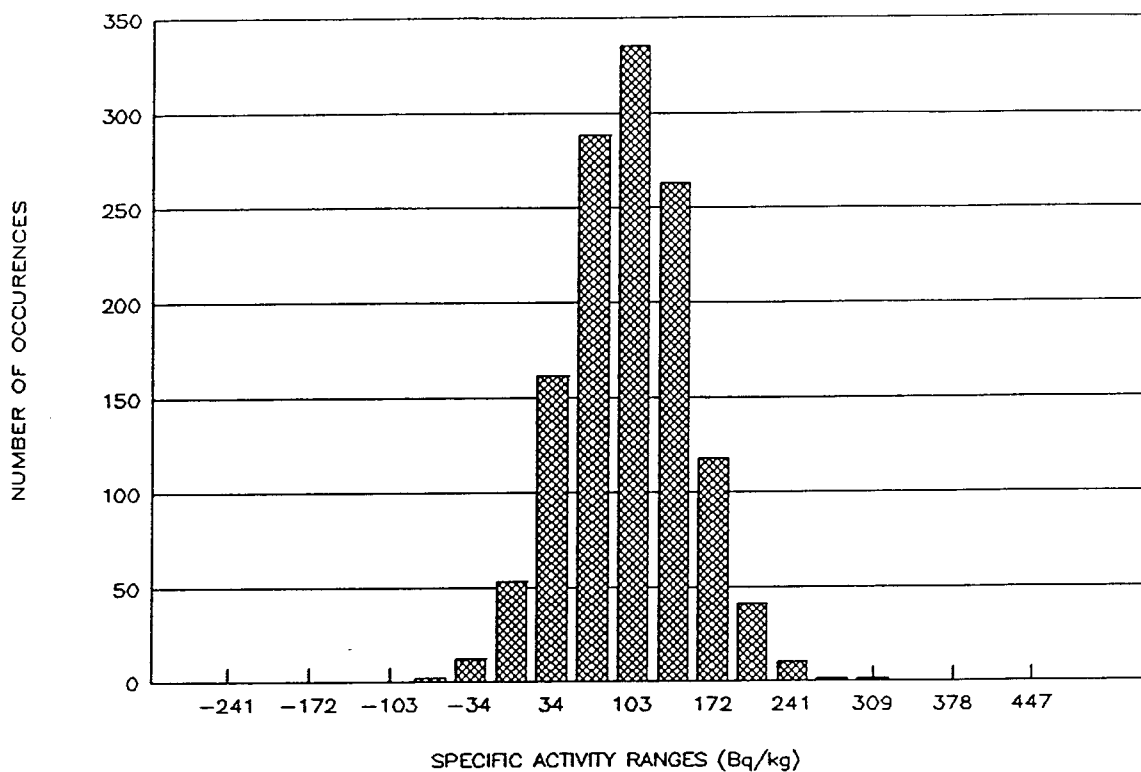
HOT PARTICLE EVENTS	156	SORTS BY ONE GATE ONLY	81
MULTIPARTICLE EVENTS	75	SORTS BY TWO GATES	78
DISTRIBUTED EVENTS	415		

REC CODE EXPLANATION

1.00 Source check (Soil on belt)
 2.00 Empty belt
 3.00 Test (No process soil)

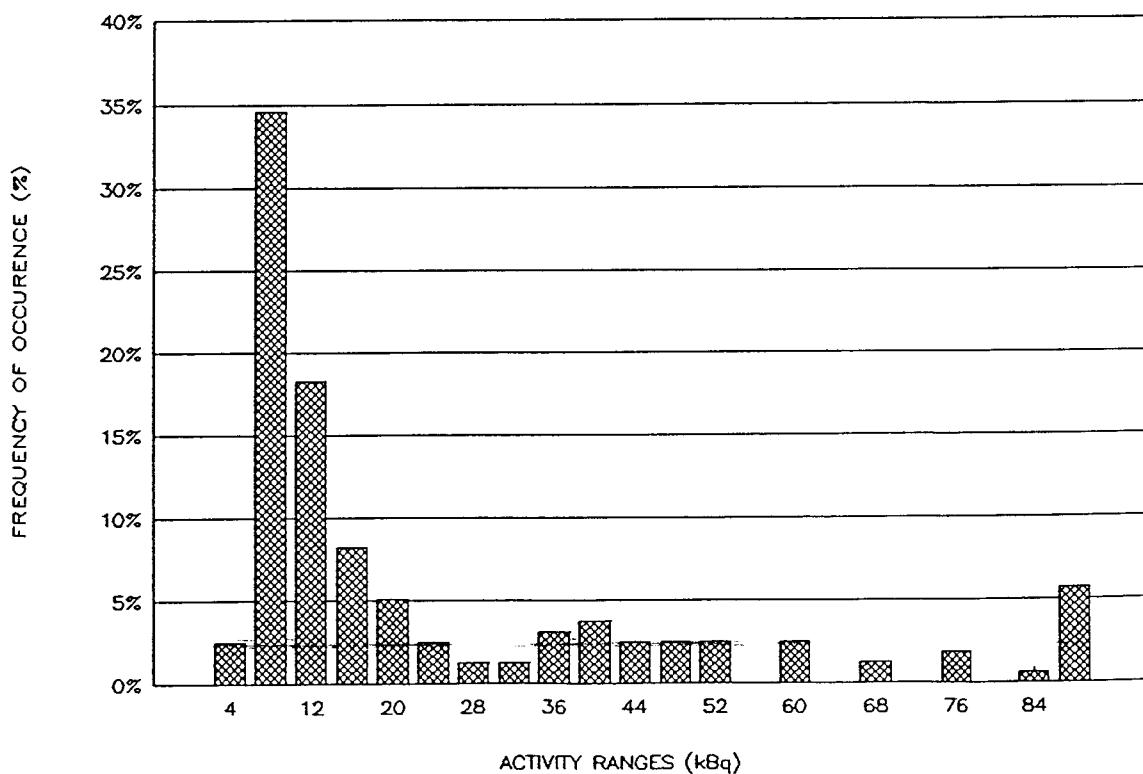
CLEAN SOIL SPECIFIC ACTIVITY

SORTER 2 LOG DATA FOR 25-Jun-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 25-Jun-93



JA SOIL CLEANUP PLANT LOG SUMMARY

SORTER 1 28-Jun-93

AVERAGE BACKGROUND COUNT RATE 0.75 ± 0.05 c/sec
 SORTER SOIL DENSITY 1.25 tons/m³
 GROUND SOIL DENSITY 1.65 tons/m³

	CONTAMINATED	CLEAN
MASS TOTAL	0.26 tons	108.2 tons
MAXIMUM/SORT	3.6 kg	58.2 kg
MINIMUM/SORT	0.7 kg	54.6 kg

WEIGHT RECOVERY OR VOLUME RECOVERY		99.8%
EQUIVALENT SOIL-IN-GROUND	0.21 yd ³	85.7 yd ³ 86.0 yd ³ /day

PARTICLE ACTIVITY (MAXIMUM ESTIMATE)

TOTAL	4,484 kBq
MAXIMUM/SORT	166 kBq
MINIMUM/SORT	3.1 kBq

DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY	1,543 kBq	7,156 kBq
MAXIMUM/SORT	81 kBq	13 kBq
MINIMUM/SORT	0 Bq	-5 kBq
SPECIFIC ACTIVITY	5,905 Bq/kg	66 Bq/kg

WORK HISTORY

WORK DAY START	05:00 AM	WORK DAY END	04:30 PM
PLANT START-UP	05:00 AM	PLANT SHUT-DOWN	04:30 PM
START SOIL PROCESSING	05:36 AM	END SOIL PROCESSING	03:57 PM
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 hr

WORK HOURS	11.5 hr
AVAILABLE HOURS	11.5 hr
ACTUAL PROCESS HOURS (total 20-sec records)	10.35 hr
DOWN-TIME	1.15 hr
TOTAL SYSTEM PAUSE	0.00 hr
NONAVAILABLE HOURS	0.0 hr
START-UP	0.61 hr
SHUT-DOWN	0.55 hr
PLANT PERFORMANCE	90.0%
PRODUCTIVITY	90.0%

TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 2,117

NONPROCESS RECORDS (Test, calibration, etc) 5

20-SEC PROCESS RECORDS

TOTAL SORT	1,863
NO SORT	0 MD>0 & MND=0
SOME SORT	1,660 AD=0 & MD=0 & MND>0
UNEXPLAINED RECORDS	203 AD>0&0<MD<MNDmax&MND<MNDmax
	0

0<AD<1kBq & MD>0	1	UNEXPLAIN	PAUSE
AD=0 & MD	0	TIME	TIME
AD<0 & MD	0	07:35:37	None
ACT_P <5 kBq	52	20.5%	

JA SOIL CLEANUP PLANT LOG SUMMARY

2-SEC COUNT PERIODS 18,630
 2-SEC RECORDS WITH SORTS 254 (ACT_P >0 kBq)
 2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR
 2 DETECTORS 58 86.6%
 3 DETECTORS 7 10.4%
 4 DETECTORS 1 1.5%
 5 DETECTORS 1 1.5%
 6 DETECTORS 0 0.0%
 7 DETECTORS 0 0.0%
 8 DETECTORS 0 0.0%
 TOTAL 67
 NET 2-SEC RECORDS WITH SORTS 187
 2-SEC PERIODS WITH NO SORTS 18,443
 AVG TIME BETWEEN 2-SEC SORTS 199.3 sec

1-GATE SORTS		129	ACT_NO	NUMBER	SPEC_A	ACT_P	SORT FREQ%		ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)		(kBq)
1	4	3.1%	-14000	0	-241	4000	12	4.7%	4
2	12	9.3%	-12000	0	-206	8000	112	44.1%	8
3	24	18.6%	-10000	1	-172	12000	37	14.6%	12
4	27	20.9%	-8000	2	-137	16000	19	7.5%	16
5	20	15.5%	-6000	1	-103	20000	16	6.3%	20
6	18	14.0%	-4000	6	-69	24000	5	2.0%	24
7	19	14.7%	-2000	21	-34	28000	8	3.1%	28
8	5	3.9%	0	111	0	32000	6	2.4%	32
TOTAL	129		2000	357	34	36000	0	0.0%	36
			4000	533	69	40000	5	2.0%	40
2-GATE SORTS		125	6000	410	103	44000	4	1.6%	44
DETECTR	SORTS	FREQ%	8000	297	137	48000	3	1.2%	48
8			10000	97	172	52000	3	1.2%	52
9	6	4.8%	12000	27	206	56000	1	0.4%	56
10	15	12.0%	14000	5	241	60000	3	1.2%	60
11	28	22.4%	16000	0	275	64000	6	2.4%	64
12	19	15.2%	18000	0	309	68000	3	1.2%	68
13	21	16.8%	20000	0	344	72000	0	0.0%	72
14	25	20.0%	22000	0	378	76000	4	1.6%	76
15	11	8.8%	24000	0	412	80000	3	1.2%	80
TOTAL	125		26000	0	447	84000	2	0.8%	84
			>28000	0	0	>84000	2	0.8%	>84
			TOTAL	1868		TOTAL	254		

SUMMARY TOTALS

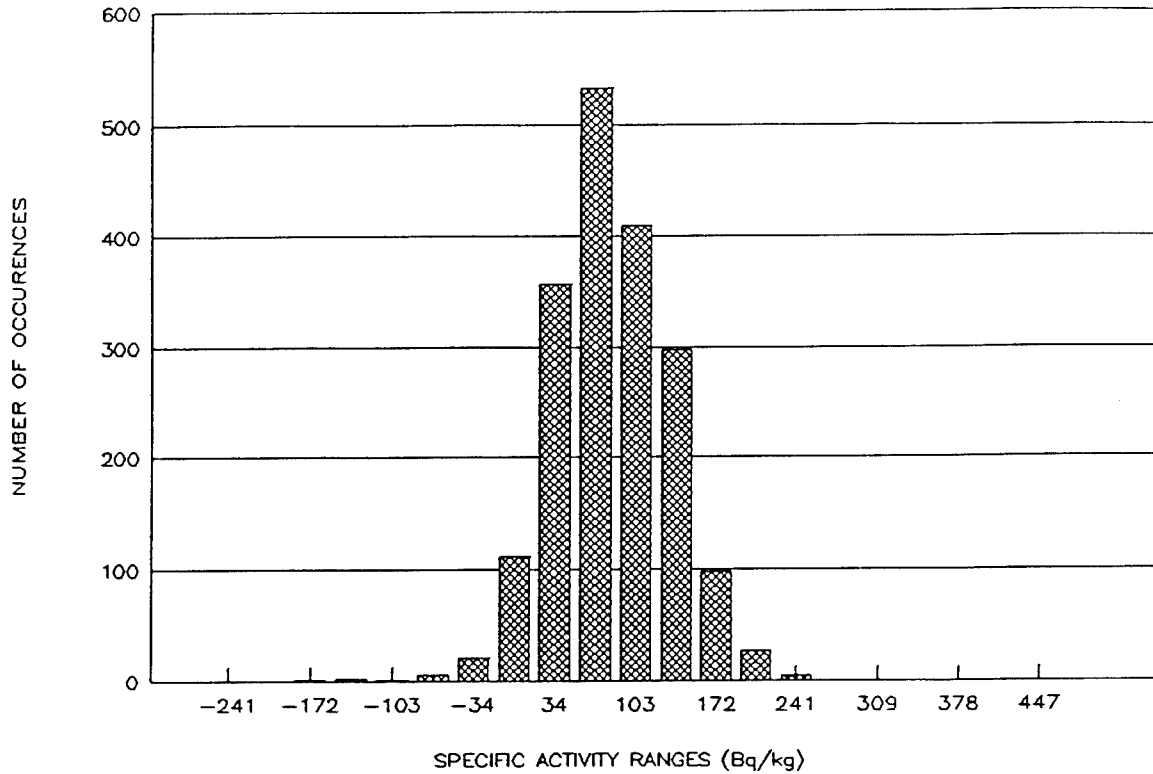
HOT PARTICLE EVENTS	249	SORTS BY ONE GATE ONLY	129
MULTIPARTICLE EVENTS	109	SORTS BY TWO GATES	125
DISTRIBUTED EVENTS	0		

REC CODE EXPLANATION

1.00 Source check (Soil on belt)
 2.00 Empty belt
 3.00 Test (No process soil)

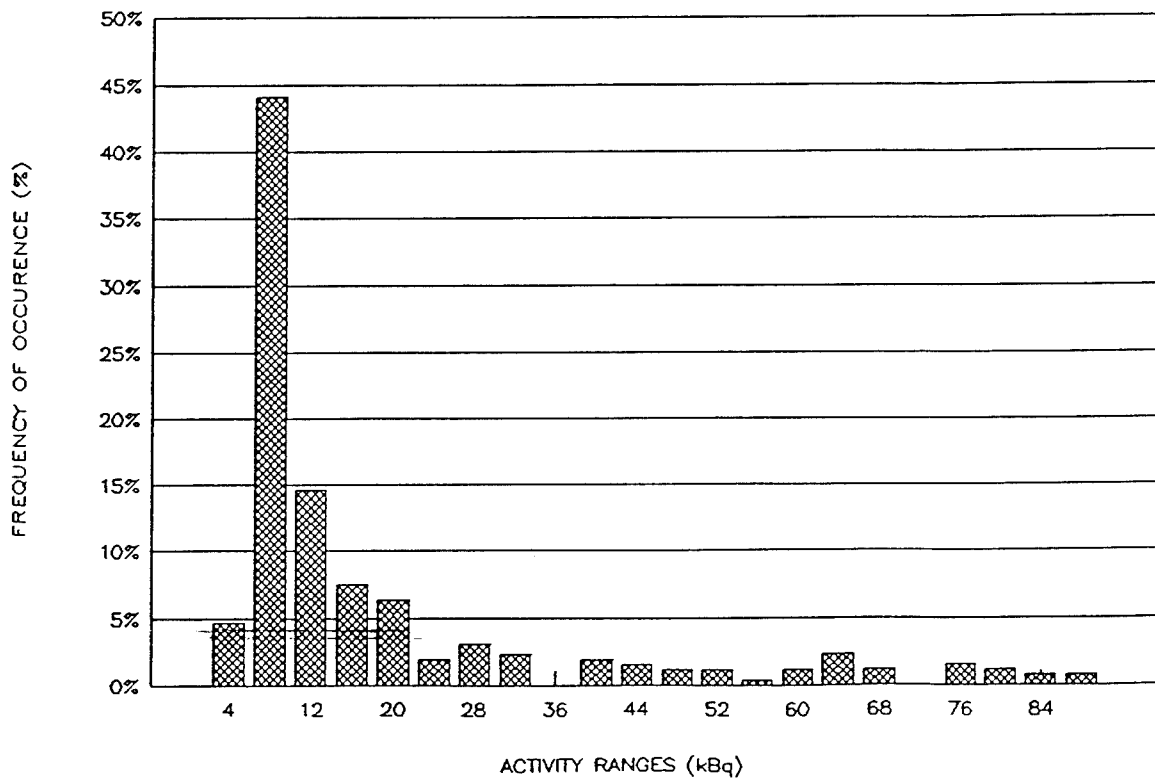
CLEAN SOIL SPECIFIC ACTIVITY

SORTER 1 LOG DATA FOR 28-Jun-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 28-Jun-93



JA SOIL CLEANUP PLANT LOG SUMMARY

SORTER 2 28-Jun-93

AVERAGE BACKGROUND COUNT RATE 0.79 ± 0.02 c/sec
 SORTER SOIL DENSITY 1.25 tons/m³
 GROUND SOIL DENSITY 1.65 tons/m³

	CONTAMINATED	CLEAN
MASS TOTAL	0.25 tons	108.9 tons
MAXIMUM/SORT	2.9 kg	58.3 kg
MINIMUM/SORT	0.7 kg	55.3 kg

WEIGHT RECOVERY OR VOLUME RECOVERY		99.8%
EQUIVALENT SOIL-IN-GROUND	0.20 yd ³	86.3 yd ³ 86.5 yd ³ /day

PARTICLE ACTIVITY (MAXIMUM ESTIMATE)

TOTAL	4,017 kBq
MAXIMUM/SORT	193 kBq
MINIMUM/SORT	3.3 kBq

DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY		
	1,498 kBq	11,748 kBq
MAXIMUM/SORT	136 kBq	16 kBq
MINIMUM/SORT	0 Bq	-4 kBq
SPECIFIC ACTIVITY	6,027 Bq/kg	108 Bq/kg

WORK HISTORY

WORK DAY START 05:00 AM
 PLANT START-UP 05:00 AM
 START SOIL PROCESSING 05:35 AM
 LUNCH START 11:30 AM

WORK DAY END 04:30 PM
 PLANT SHUT-DOWN 04:30 PM
 END SOIL PROCESSING 03:59 PM
 LUNCH PERIOD 0.0 hr

WORK HOURS	11.5 hr
AVAILABLE HOURS	11.5 hr
ACTUAL PROCESS HOURS (total 20-sec records)	10.40 hr
DOWN-TIME	1.10 hr
TOTAL SYSTEM PAUSE	0.00 hr
NONAVAILABLE HOURS	0.0 hr
START-UP	0.59 hr
SHUT-DOWN	0.51 hr
PLANT PERFORMANCE	90.4%
PRODUCTIVITY	90.4%

TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 2,076

NONPROCESS RECORDS (Test, calibration, etc) 2

20-SEC PROCESS RECORDS

TOTAL SORT	1,872
NO SORT	0 MD>0 & MND=0
SOME SORT	1,664 AD=0 & MD=0 & MND>0
UNEXPLAINED RECORDS	208 AD>0&0<MD<MNDmax&MND<MNDmax
	0

0<AD<1kBq & MD>0	1	UNEXPLAIN	PAUSE
AD=0 & MD	0	TIME	TIME
AD<0 & MD	0	06:35:37	None
ACT_P <5 kBq	25	12.3%	

JA SOIL CLEANUP PLANT LOG SUMMARY

2-SEC COUNT PERIODS 18,720
 2-SEC RECORDS WITH SORTS 204 (ACT_P >0 kBq)
 2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR
 2 DETECTORS 49 86.0%
 3 DETECTORS 6 10.5%
 4 DETECTORS 2 3.5%
 5 DETECTORS 0 0.0%
 6 DETECTORS 0 0.0%
 7 DETECTORS 0 0.0%
 8 DETECTORS 0 0.0%
 TOTAL 57
 NET 2-SEC RECORDS WITH SORTS 147
 2-SEC PERIODS WITH NO SORTS 18,573
 AVG TIME BETWEEN 2-SEC SORTS 254.7 sec

1-GATE SORTS		106	ACT_NO	NUMBER	SPEC_A	ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)		(kBq)
1	5	4.7%	-14000	0	-240	4000	14	6.9%	4
2	15	14.2%	-12000	0	-206	8000	79	38.7%	8
3	16	15.1%	-10000	0	-172	12000	23	11.3%	12
4	21	19.8%	-8000	0	-137	16000	31	15.2%	16
5	23	21.7%	-6000	1	-103	20000	12	5.9%	20
6	15	14.2%	-4000	2	-69	24000	6	2.9%	24
7	9	8.5%	-2000	4	-34	28000	5	2.5%	28
8	2	1.9%	0	19	0	32000	1	0.5%	32
TOTAL	106		2000	92	34	36000	0	0.0%	36
			4000	284	69	40000	1	0.5%	40
2-GATE SORTS		98	6000	501	103	44000	3	1.5%	44
DETECTR	SORTS	FREQ%	8000	466	137	48000	1	0.5%	48
8			10000	322	172	52000	3	1.5%	52
9	10	10.2%	12000	134	206	56000	5	2.5%	56
10	14	14.3%	14000	40	240	60000	3	1.5%	60
11	18	18.4%	16000	8	274	64000	2	1.0%	64
12	20	20.4%	18000	1	309	68000	2	1.0%	68
13	18	18.4%	20000	0	343	72000	4	2.0%	72
14	12	12.2%	22000	0	377	76000	2	1.0%	76
15	6	6.1%	24000	0	412	80000	3	1.5%	80
TOTAL	98		26000	0	446	84000	0	0.0%	84
			>28000	0	0	>84000	4	2.0%	>84
			TOTAL	1874		TOTAL	204		

SUMMARY TOTALS

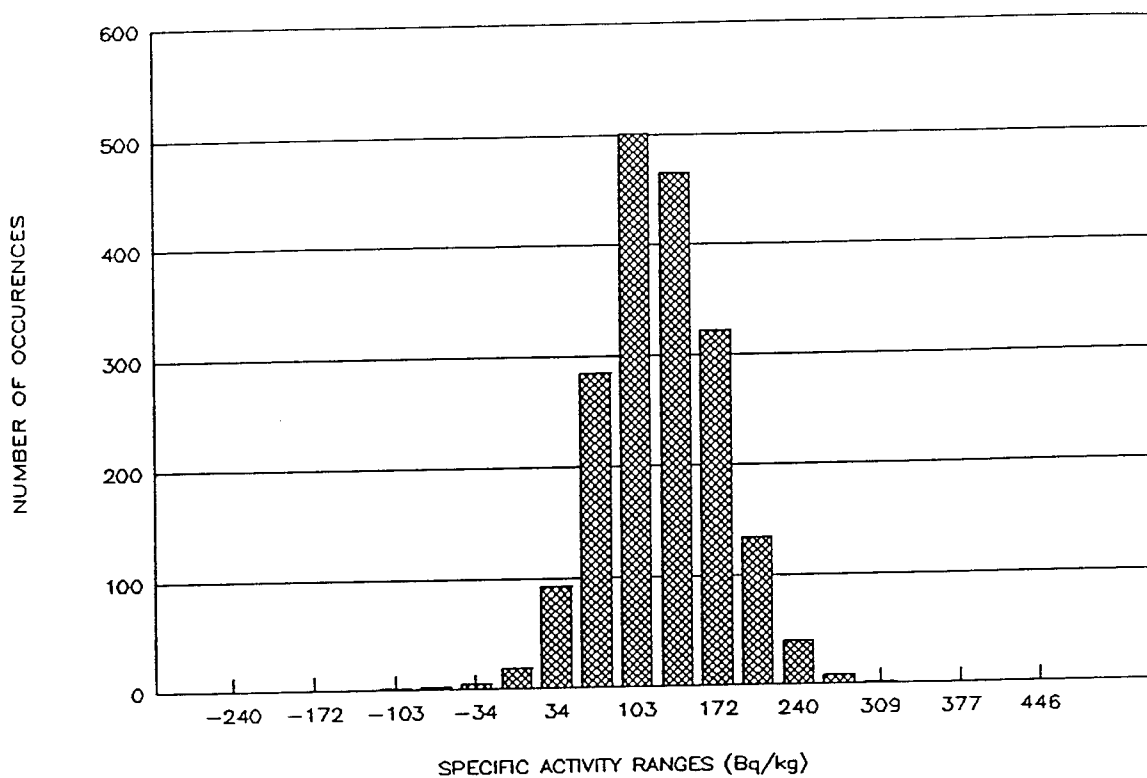
HOT PARTICLE EVENTS	203	SORTS BY ONE GATE ONLY	106
MULTIPARTICLE EVENTS	140	SORTS BY TWO GATES	98
DISTRIBUTED EVENTS	0		

REC CODE EXPLANATION

1.00 Source check (Soil on belt)
 2.00 Empty belt
 3.00 Test (No process soil)

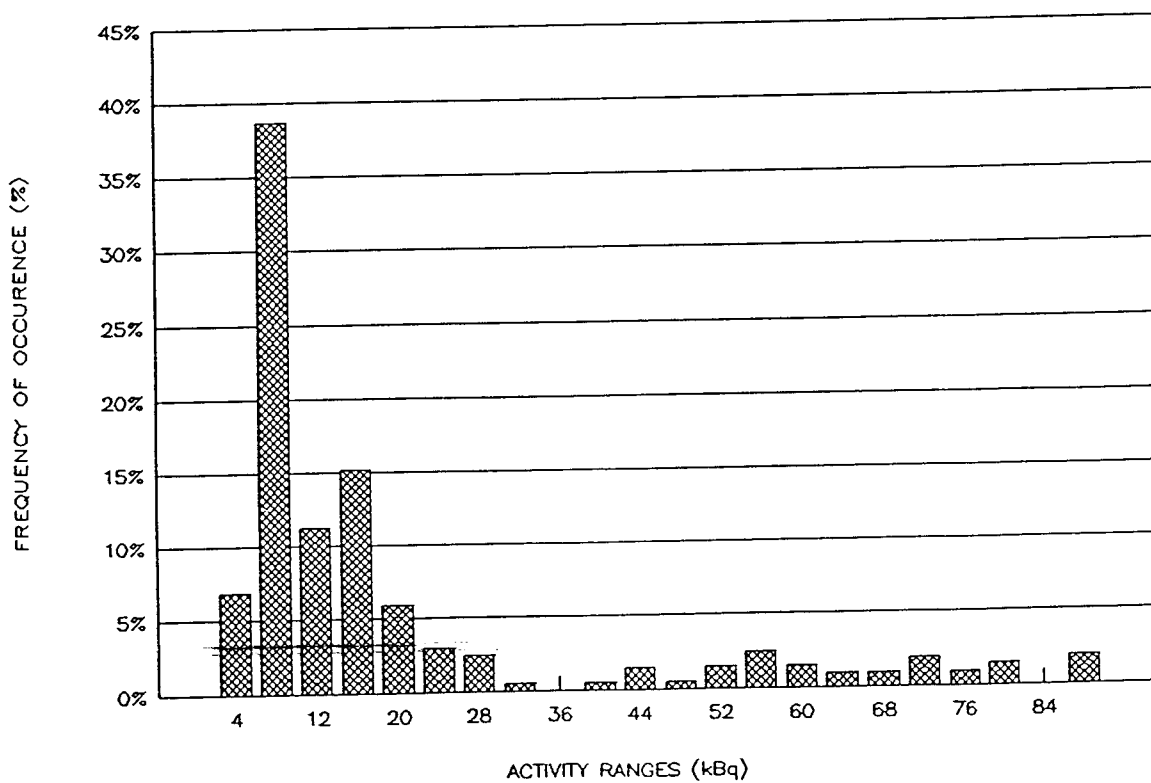
CLEAN SOIL SPECIFIC ACTIVITY

SORTER 2 LOG DATA FOR 28-Jun-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 28-Jun-93



JA SOIL CLEANUP PLANT LOG SUMMARY

SORTER 1 29-Jun-93

AVERAGE BACKGROUND COUNT RATE 0.73 ± 0.04 c/sec
 SORTER SOIL DENSITY 1.25 tons/m³
 GROUND SOIL DENSITY 1.65 tons/m³

	CONTAMINATED	CLEAN
MASS TOTAL	0.31 tons	98.1 tons
MAXIMUM/SORT	3.6 kg	58.2 kg
MINIMUM/SORT	0.7 kg	54.6 kg

WEIGHT RECOVERY OR VOLUME RECOVERY		99.7%
EQUIVALENT SOIL-IN-GROUND	0.25 yd ³	77.7 yd ³ 78.0 yd ³ /day

PARTICLE ACTIVITY (MAXIMUM ESTIMATE)

TOTAL	4,970 kBq
MAXIMUM/SORT	133 kBq
MINIMUM/SORT	2.5 kBq

DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY

	1,824 kBq	6,960 kBq
MAXIMUM/SORT	81 kBq	17 kBq
MINIMUM/SORT	0 Bq	-5 kBq
SPECIFIC ACTIVITY	5,833 Bq/kg	71 Bq/kg

WORK HISTORY

WORK DAY START	05:00 AM	WORK DAY END	04:30 PM
PLANT START-UP	05:00 AM	PLANT SHUT-DOWN	04:30 PM
START SOIL PROCESSING	05:25 AM	END SOIL PROCESSING	04:00 PM
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 hr

WORK HOURS	11.5 hr
AVAILABLE HOURS	11.5 hr
ACTUAL PROCESS HOURS (total 20-sec records)	9.39 hr
DOWN-TIME	2.11 hr
TOTAL SYSTEM PAUSE	1.12 hr
NONAVAILABLE HOURS	0.0 hr
START-UP	0.42 hr
SHUT-DOWN	0.50 hr
PLANT PERFORMANCE	81.6%
PRODUCTIVITY	81.6%

TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 1,981

NONPROCESS RECORDS (Test, calibration, etc) 24

20-SEC PROCESS RECORDS

TOTAL SORT	1,690
0 MD>0 & MND=0	
NO SORT	1,460 AD=0 & MD=0 & MND>0
SOME SORT	230 AD>0&0<MD<MNDmax&MND<MNDmax
UNEXPLAINED RECORDS	0

		UNEXPLAIN	PAUSE
		TIME	TIME
0<AD<1kBq & MD>0	0	None	08:18
AD=0 & MD	0		
AD<0 & MD	0		
ACT_P <5 kBq	56 19.2%		09:08

JA SOIL CLEANUP PLANT LOG SUMMARY

11:50

2-SEC COUNT PERIODS 16,900

2-SEC RECORDS WITH SORTS 291 (ACT_P >0 kBq)

2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR

2 DETECTORS	72	73.5%
3 DETECTORS	21	21.4%
4 DETECTORS	4	4.1%
5 DETECTORS	1	1.0%
6 DETECTORS	0	0.0%
7 DETECTORS	0	0.0%
8 DETECTORS	0	0.0%
TOTAL	98	
NET 2-SEC RECORDS WITH SORTS	193	
2-SEC PERIODS WITH NO SORTS	16,707	
AVG TIME BETWEEN 2-SEC SORTS	175.1 sec	

1-GATE SORTS	144	ACT_ND	NUMBER	SPEC_A	ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)	(kBq)
1	4	2.8%	-14000	0	-241	4000	15	5.2%
2	18	12.5%	-12000	0	-206	8000	119	40.9%
3	17	11.8%	-10000	0	-172	12000	57	19.6%
4	28	19.4%	-8000	0	-137	16000	21	7.2%
5	32	22.2%	-6000	6	-103	20000	15	5.2%
6	28	19.4%	-4000	16	-69	24000	7	2.4%
7	13	9.0%	-2000	29	-34	28000	7	2.4%
8	4	2.8%	0	106	0	32000	2	0.7%
TOTAL	144		2000	274	34	36000	7	2.4%
			4000	422	69	40000	7	2.4%
2-GATE SORTS	147		6000	444	103	44000	4	1.4%
DETECTR	SORTS	FREQ%	8000	265	137	48000	2	0.7%
8			10000	106	172	52000	4	1.4%
9	9	6.1%	12000	36	206	56000	3	1.0%
10	17	11.6%	14000	9	241	60000	3	1.0%
11	32	21.8%	16000	0	275	64000	5	1.7%
12	29	19.7%	18000	1	309	68000	4	1.4%
13	33	22.4%	20000	0	344	72000	2	0.7%
14	18	12.2%	22000	0	378	76000	1	0.3%
15	9	6.1%	24000	0	412	80000	1	0.3%
TOTAL	147		26000	0	447	84000	1	0.3%
			>28000	0	0	>84000	4	1.4%
			TOTAL	1714		TOTAL	291	

SUMMARY TOTALS

HOT PARTICLE EVENTS	301	SORTS BY ONE GATE ONLY	144
MULTIPARTICLE EVENTS	128	SORTS BY TWO GATES	147
DISTRIBUTED EVENTS	0		

REC CODE EXPLANATION

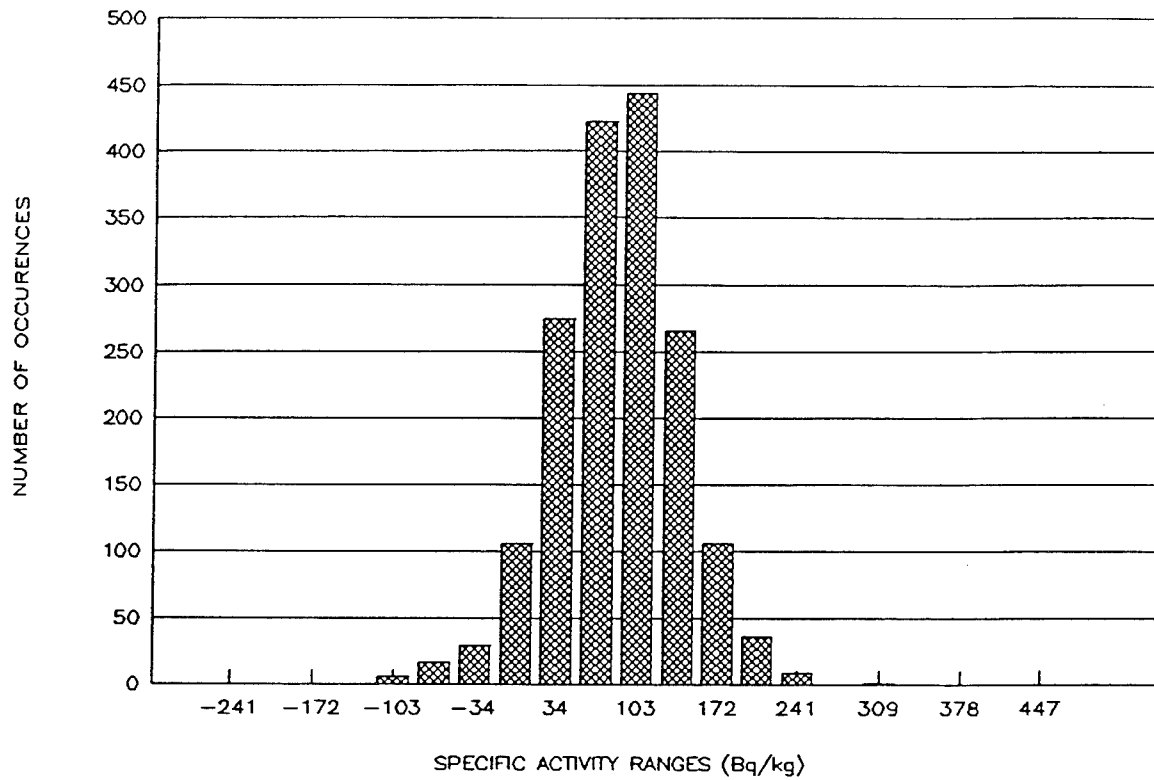
1.00 Source check (Soil on belt)

2.00 Empty belt

3.00 Test (No process soil)

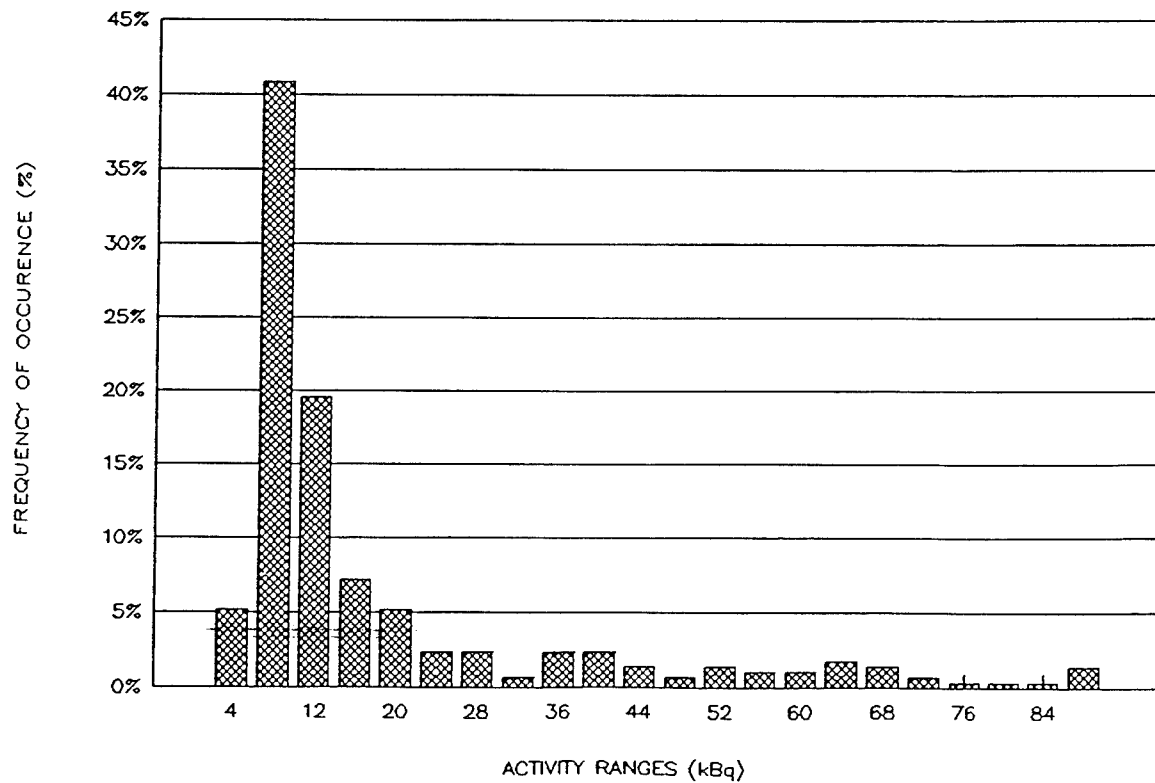
CLEAN SOIL SPECIFIC ACTIVITY

SORTER 1 LOG DATA FOR 29-Jun-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 29-Jun-93



JA SOIL CLEANUP PLANT LOG SUMMARY

SORTER 2 29-Jun-93

AVERAGE BACKGROUND COUNT RATE 0.79 ± 0.03 c/sec
 SORTER SOIL DENSITY 1.25 tons/m³
 GROUND SOIL DENSITY 1.65 tons/m³

	CONTAMINATED	CLEAN
MASS TOTAL	0.25 tons	99.5 tons
MAXIMUM/SORT	4.4 kg	58.3 kg
MINIMUM/SORT	0.7 kg	53.9 kg

WEIGHT RECOVERY OR VOLUME RECOVERY		99.7%
EQUIVALENT SOIL-IN-GROUND	0.20 yd³	78.9 yd³ 79.1 yd³/day

PARTICLE ACTIVITY (MAXIMUM ESTIMATE)

TOTAL	4,713 kBq
MAXIMUM/SORT	422 kBq
MINIMUM/SORT	2.8 kBq

DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY	1,738 kBq	9,874 kBq
MAXIMUM/SORT	211 kBq	17 kBq
MINIMUM/SORT	0 Bq	-11 kBq
SPECIFIC ACTIVITY	6,911 Bq/kg	99 Bq/kg

WORK HISTORY			
WORK DAY START	05:00 AM	WORK DAY END	04:30 PM
PLANT START-UP	05:00 AM	PLANT SHUT-DOWN	04:30 PM
START SOIL PROCESSING	05:25 AM	END SOIL PROCESSING	04:01 PM
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 hr

WORK HOURS	11.5 hr
AVAILABLE HOURS	11.5 hr
ACTUAL PROCESS HOURS (total 20-sec records)	9.51 hr
DOWN-TIME	1.99 hr
TOTAL SYSTEM PAUSE	1.12 hr
NONAVAILABLE HOURS	0.0 hr
START-UP	0.42 hr
SHUT-DOWN	0.47 hr
PLANT PERFORMANCE	82.7%
PRODUCTIVITY	82.7%

TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 1,943
 NONPROCESS RECORDS (Test, calibration, etc) 5

20-SEC PROCESS RECORDS	1,711
TOTAL SORT	0 MD>0 & MND=0
NO SORT	1,520 AD=0 & MD=0 & MND>0
SOME SORT	191 AD>0&0<MD<MNDmax&MND<MNDmax
UNEXPLAINED RECORDS	0

0<AD<1kBq & MD>0	0	UNEXPLAIN	PAUSE
AD=0 & MD	0	TIME	TIME
AD<0 & MD	0	None	09:08
ACT_P <5 kBq	31 13.4%		11:50

JA SOIL CLEANUP PLANT LOG SUMMARY

2-SEC COUNT PERIODS 17,110
 2-SEC RECORDS WITH SORTS 232 (ACT_P >0 kBq)
 2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR
 2 DETECTORS 58 90.6%
 3 DETECTORS 6 9.4%
 4 DETECTORS 0 0.0%
 5 DETECTORS 0 0.0%
 6 DETECTORS 0 0.0%
 7 DETECTORS 0 0.0%
 8 DETECTORS 0 0.0%
 TOTAL 64
 NET 2-SEC RECORDS WITH SORTS 168
 2-SEC PERIODS WITH NO SORTS 16,942
 AVG TIME BETWEEN 2-SEC SORTS 203.7 sec

1-GATE SORTS DETECTR	SORTS	121 FREQ%	ACT_NO (Bq)	NUMBER (#)	SPEC_A (Bq/kg)	ACT_P (Bq)	SORT FREQ% (#)	ACT_P (kBq)
1	6	5.0%	-14000	1	-240	4000	8 3.4%	4
2	24	19.8%	-12000	0	-206	8000	83 35.8%	8
3	24	19.8%	-10000	1	-172	12000	43 18.5%	12
4	16	13.2%	-8000	2	-137	16000	22 9.5%	16
5	20	16.5%	-6000	2	-103	20000	23 9.9%	20
6	18	14.9%	-4000	4	-69	24000	11 4.7%	24
7	11	9.1%	-2000	12	-34	28000	7 3.0%	28
8	2	1.7%	0	45	0	32000	3 1.3%	32
TOTAL	121		2000	118	34	36000	1 0.4%	36
			4000	281	69	40000	3 1.3%	40
2-GATE SORTS		111	6000	448	103	44000	4 1.7%	44
DETECTR	SORTS	FREQ%	8000	416	137	48000	1 0.4%	48
8			10000	249	172	52000	0 0.0%	52
9	9	8.1%	12000	107	206	56000	4 1.7%	56
10	21	18.9%	14000	23	240	60000	5 2.2%	60
11	21	18.9%	16000	6	274	64000	3 1.3%	64
12	21	18.9%	18000	1	309	68000	0 0.0%	68
13	19	17.1%	20000	0	343	72000	1 0.4%	72
14	14	12.6%	22000	0	377	76000	3 1.3%	76
15	6	5.4%	24000	0	412	80000	1 0.4%	80
TOTAL	111		26000	0	446	84000	1 0.4%	84
			>28000	0	0	>84000	5 2.2%	>84
			TOTAL	1716		TOTAL	232	

SUMMARY TOTALS

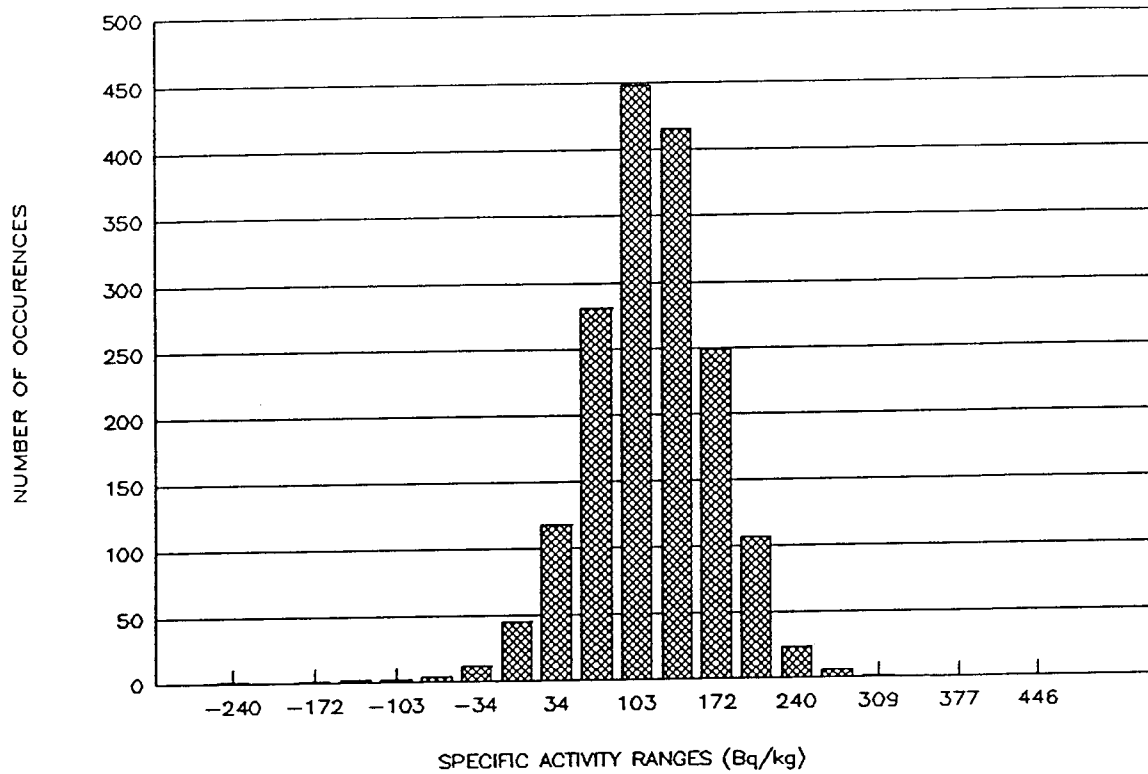
HOT PARTICLE EVENTS	235	SORTS BY ONE GATE ONLY	121
MULTIPARTICLE EVENTS	110	SORTS BY TWO GATES	111
DISTRIBUTED EVENTS	0		

REC CODE EXPLANATION

1.00 Source check (Soil on belt)
 2.00 Empty belt
 3.00 Test (No process soil)

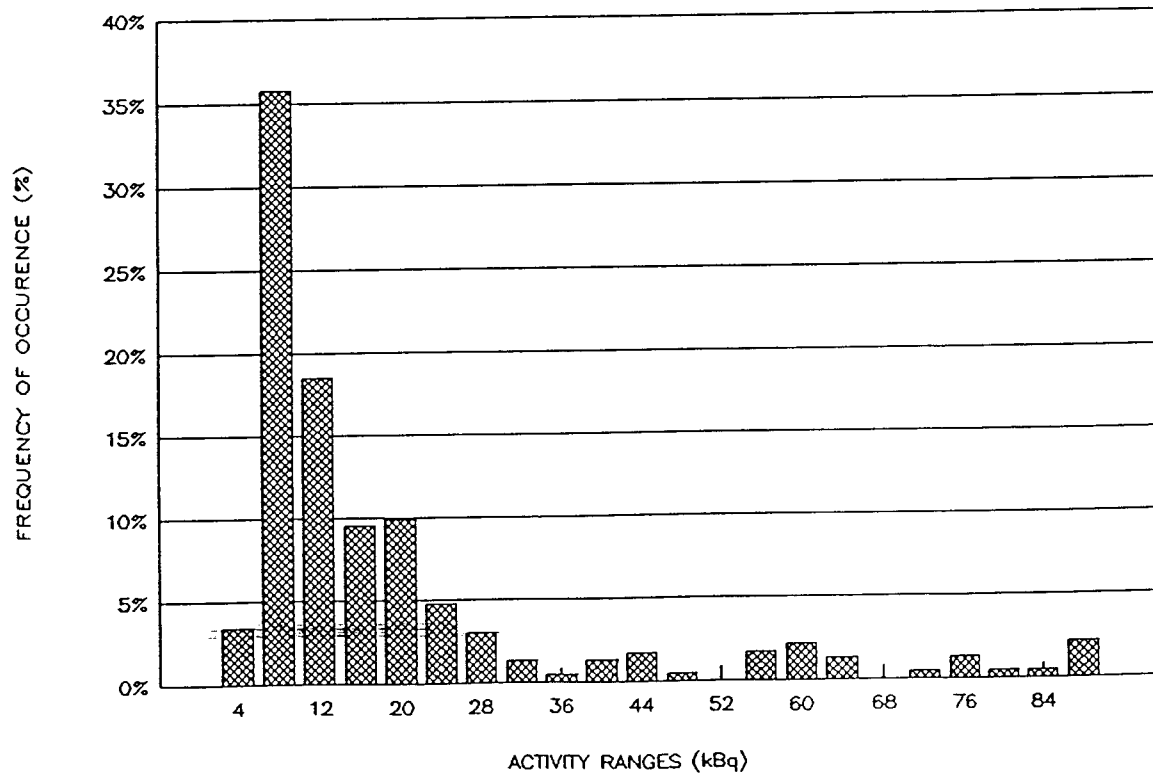
CLEAN SOIL SPECIFIC ACTIVITY

SORTER 2 LOG DATA FOR 29-Jun-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 29-Jun-93



JA SOIL CLEANUP PLANT LOG SUMMARY

SORTER 1 30-Jun-93

AVERAGE BACKGROUND COUNT RATE 0.72 ± 0.04 c/sec
 SORTER SOIL DENSITY 1.25 tons/m³
 GROUND SOIL DENSITY 1.65 tons/m³

	CONTAMINATED	CLEAN
MASS TOTAL	0.16 tons	59.7 tons
MAXIMUM/SORT	5.1 kg	58.2 kg
MINIMUM/SORT	0.7 kg	53.1 kg

WEIGHT RECOVERY OR VOLUME RECOVERY		99.7%
EQUIVALENT SOIL-IN-GROUND	0.13 yd ³	47.4 yd ³ 47.5 yd ³ /day

PARTICLE ACTIVITY (MAXIMUM ESTIMATE)

TOTAL	2,271 kBq
MAXIMUM/SORT	360 kBq
MINIMUM/SORT	2.4 kBq

DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY

	867 kBq	4,520 kBq
MAXIMUM/SORT	209 kBq	13 kBq
MINIMUM/SORT	0 Bq	-9 kBq
SPECIFIC ACTIVITY	5,448 Bq/kg	76 Bq/kg

WORK HISTORY

WORK DAY START	05:00 AM	WORK DAY END	04:30 PM
PLANT START-UP	05:00 AM	PLANT SHUT-DOWN	11:30 AM
START SOIL PROCESSING	05:20 AM	END SOIL PROCESSING	11:03 AM
LUNCH START	11:30 AM	LUNCH PERIOD	0.5 hr

WORK HOURS	11.0 hr
AVAILABLE HOURS	6.5 hr
ACTUAL PROCESS HOURS (total 20-sec records)	5.72 hr
DOWN-TIME	0.78 hr
TOTAL SYSTEM PAUSE	0.00 hr
NONAVAILABLE HOURS	4.5 hr
START-UP	0.34 hr
SHUT-DOWN	0.45 hr
PLANT PERFORMANCE	87.9%
PRODUCTIVITY	52.0%

TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 1,153

NONPROCESS RECORDS (Test, calibration, etc) 3

20-SEC PROCESS RECORDS

TOTAL SORT	1,029
NO SORT	0 MD>0 & MND=0
SOME SORT	891 AD=0 & MD=0 & MND>0
UNEXPLAINED RECORDS	138 AD>0&0<MD<MNDmax&MND<MNDmax
	0

0<AD<1kBq & MD>0	0	UNEXPLAIN	PAUSE
AD=0 & MD	0	TIME	TIME
AD<0 & MD	0	None	None
ACT_P <5 kBq	21	16.9%	

JA SOIL CLEANUP PLANT LOG SUMMARY

2-SEC COUNT PERIODS 10,290
 2-SEC RECORDS WITH SORTS 124 (ACT_P >0 kBq)
 2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR
 2 DETECTORS 27 81.8%
 3 DETECTORS 6 18.2%
 4 DETECTORS 0 0.0%
 5 DETECTORS 0 0.0%
 6 DETECTORS 0 0.0%
 7 DETECTORS 0 0.0%
 8 DETECTORS 0 0.0%
 TOTAL 33
 NET 2-SEC RECORDS WITH SORTS 91
 2-SEC PERIODS WITH NO SORTS 10,199
 AVG TIME BETWEEN 2-SEC SORTS 226.2 sec

1-GATE SORTS DETECTR	SORTS	62 FREQ%	ACT_NO (Bq)	NUMBER (#)	SPEC_A (Bq/kg)	ACT_P (Bq)	SORT (#)	FREQ%	ACT_P (kBq)
1	2	3.2%	-14000	0	-241	4000	5	4.0%	4
2	4	6.5%	-12000	0	-206	8000	65	52.4%	8
3	8	12.9%	-10000	0	-172	12000	21	16.9%	12
4	8	12.9%	-8000	1	-137	16000	9	7.3%	16
5	12	19.4%	-6000	1	-103	20000	4	3.2%	20
6	10	16.1%	-4000	2	-69	24000	2	1.6%	24
7	14	22.6%	-2000	10	-34	28000	4	3.2%	28
8	4	6.5%	0	48	0	32000	1	0.8%	32
TOTAL	62		2000	147	34	36000	0	0.0%	36
			4000	268	69	40000	2	1.6%	40
			6000	283	103	44000	0	0.0%	44
2-GATE SORTS DETECTR	SORTS	62 FREQ%	8000	166	137	48000	1	0.8%	48
8			10000	82	172	52000	3	2.4%	52
9	2	3.2%	12000	22	206	56000	0	0.0%	56
10	3	4.8%	14000	2	241	60000	1	0.8%	60
11	11	17.7%	16000	0	275	64000	1	0.8%	64
12	12	19.4%	18000	0	309	68000	0	0.0%	68
13	15	24.2%	20000	0	344	72000	1	0.8%	72
14	9	14.5%	22000	0	378	76000	0	0.0%	76
15	10	16.1%	24000	0	412	80000	0	0.0%	80
TOTAL	62		26000	0	447	84000	1	0.8%	84
			>28000	0	0	>84000	3	2.4%	>84
			TOTAL	1032		TOTAL	124		

SUMMARY TOTALS

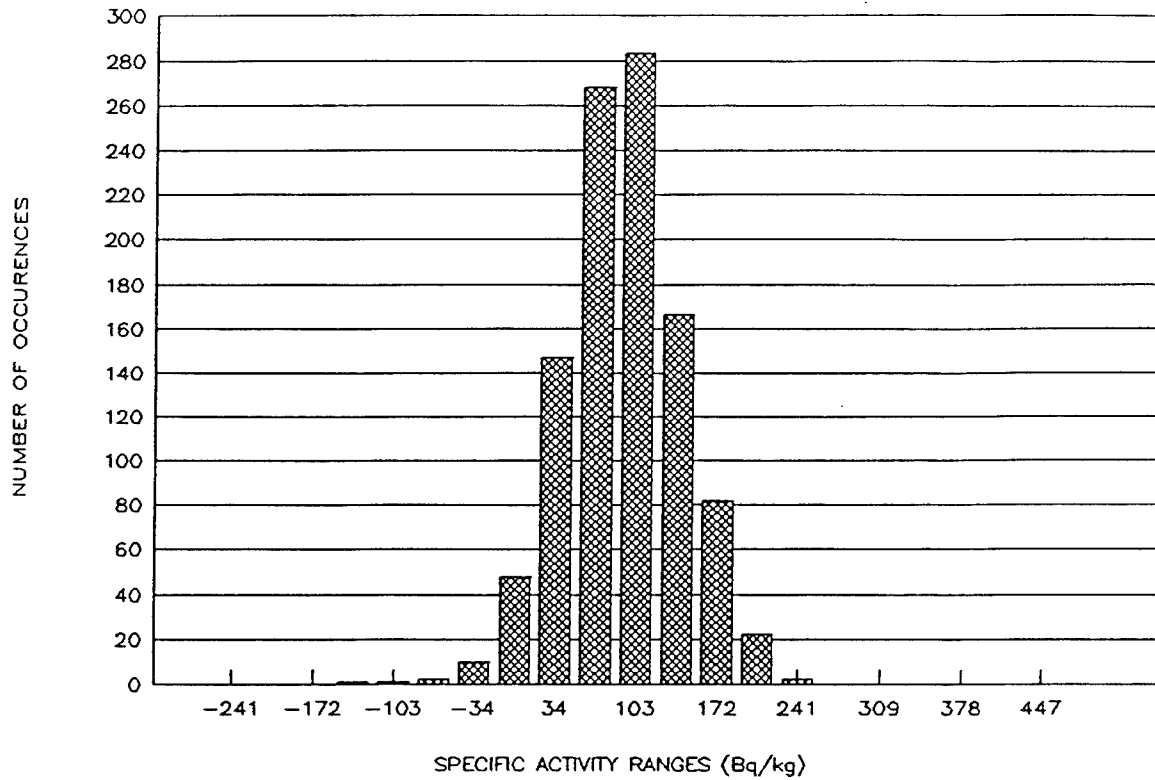
HOT PARTICLE EVENTS	127	SORTS BY ONE GATE ONLY	62
MULTIPARTICLE EVENTS	92	SORTS BY TWO GATES	62
DISTRIBUTED EVENTS	0		

REC CODE EXPLANATION

1.00 Source check (Soil on belt)
 2.00 Empty belt
 3.00 Test (No process soil)

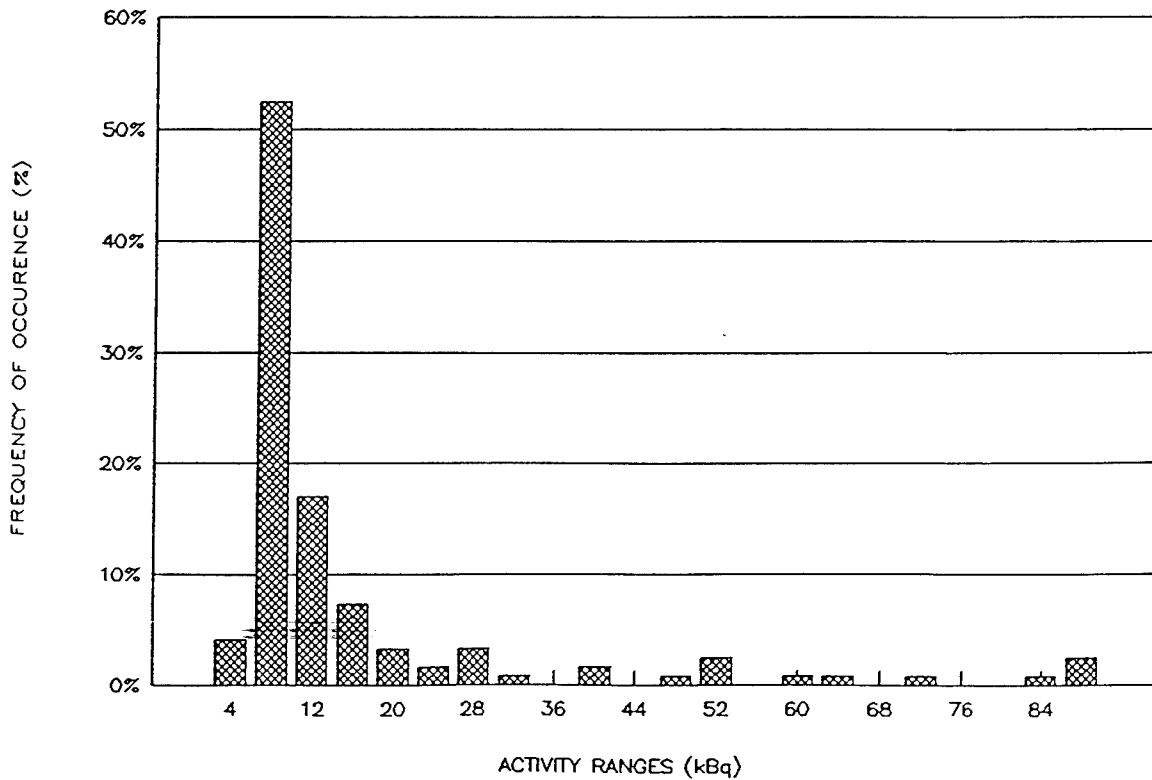
CLEAN SOIL SPECIFIC ACTIVITY

SORTER 1 LOG DATA FOR 30-Jun-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 30-Jun-93



JA SOIL CLEANUP PLANT LOG SUMMARY

SORTER 2 30-Jun-93

AVERAGE BACKGROUND COUNT RATE	0.80 ± 0.01 c/sec		
SORTER SOIL DENSITY	1.25 tons/m ³		
GROUND SOIL DENSITY	1.65 tons/m ³		
		CONTAMINATED	CLEAN
MASS TOTAL		0.14 tons	59.7 tons
MAXIMUM/SORT		4.4 kg	58.3 kg
MINIMUM/SORT		0.7 kg	53.9 kg
WEIGHT RECOVERY OR VOLUME RECOVERY			99.8%
EQUIVALENT SOIL-IN-GROUND	0.11 yd ³	47.3 yd ³	47.5 yd ³ /day
PARTICLE ACTIVITY (MAXIMUM ESTIMATE)			
TOTAL	1,723 kBq		
MAXIMUM/SORT	98 kBq		
MINIMUM/SORT	3.3 kBq		
DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY	656 kBq	5,832 kBq	
MAXIMUM/SORT	46 kBq	15 kBq	
MINIMUM/SORT	0 Bq	-4 kBq	
SPECIFIC ACTIVITY	4,555 Bq/kg	98 Bq/kg	
WORK HISTORY			
WORK DAY START	05:00 AM	WORK DAY END	04:30 PM
PLANT START-UP	05:00 AM	PLANT SHUT-DOWN	11:30 AM
START SOIL PROCESSING	05:21 AM	END SOIL PROCESSING	11:03 AM
LUNCH START	11:30 AM	LUNCH PERIOD	0.5 hr
WORK HOURS	11.0 hr		
AVAILABLE HOURS	6.5 hr		
ACTUAL PROCESS HOURS (total 20-sec records)	5.71 hr		
DOWN-TIME	0.79 hr		
TOTAL SYSTEM PAUSE	0.00 hr		
NONAVAILABLE HOURS	4.5 hr		
START-UP	0.36 hr		
SHUT-DOWN	0.44 hr		
PLANT PERFORMANCE	87.8%		
PRODUCTIVITY	51.9%		
TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)	1,164		
NONPROCESS RECORDS (Test, calibration, etc)	5		
20-SEC PROCESS RECORDS	1,027		
TOTAL SORT	0 MD>0 & MND=0		
NO SORT	912 AD=0 & MD=0 & MND>0		
SOME SORT	115 AD>0&0<MD<MNDmax&MND<MNDmax		
UNEXPLAINED RECORDS	0		
0<AD<1kBq & MD>0	2	UNEXPLAIN	PAUSE
AD=0 & MD	0	TIME	TIME
AD<0 & MD	0	10:01:54	None
ACT_P <5 kBq	21 15.3%	10:55:14	

JA SOIL CLEANUP PLANT LOG SUMMARY

2-SEC COUNT PERIODS 10,270
 2-SEC RECORDS WITH SORTS 137 (ACT_P >0 kBq)
 2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR
 2 DETECTORS 29 93.5%
 3 DETECTORS 2 6.5%
 4 DETECTORS 0 0.0%
 5 DETECTORS 0 0.0%
 6 DETECTORS 0 0.0%
 7 DETECTORS 0 0.0%
 8 DETECTORS 0 0.0%
 TOTAL 31
 NET 2-SEC RECORDS WITH SORTS 106
 2-SEC PERIODS WITH NO SORTS 10,164
 AVG TIME BETWEEN 2-SEC SORTS 193.8 sec

1-GATE SORTS		74	ACT_NO	NUMBER	SPEC_A	ACT_P	SORT FREQX		ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)		(kBq)
1	4	5.4%	-14000	0	-240	4000	5	3.6%	4
2	12	16.2%	-12000	0	-206	8000	67	48.9%	8
3	13	17.6%	-10000	0	-172	12000	27	19.7%	12
4	11	14.9%	-8000	1	-137	16000	12	8.8%	16
5	15	20.3%	-6000	2	-103	20000	5	3.6%	20
6	9	12.2%	-4000	1	-69	24000	7	5.1%	24
7	9	12.2%	-2000	4	-34	28000	2	1.5%	28
8	1	1.4%	0	20	0	32000	2	1.5%	32
TOTAL	74		2000	85	34	36000	1	0.7%	36
			4000	181	69	40000	1	0.7%	40
2-GATE SORTS		63	6000	296	103	44000	3	2.2%	44
DETECTR	SORTS	FREQ%	8000	226	137	48000	0	0.0%	48
8			10000	145	172	52000	0	0.0%	52
9	5	7.9%	12000	54	206	56000	0	0.0%	56
10	9	14.3%	14000	13	240	60000	2	1.5%	60
11	13	20.6%	16000	4	274	64000	2	1.5%	64
12	11	17.5%	18000	0	309	68000	0	0.0%	68
13	13	20.6%	20000	0	343	72000	0	0.0%	72
14	8	12.7%	22000	0	377	76000	0	0.0%	76
15	4	6.3%	24000	0	412	80000	0	0.0%	80
TOTAL	63		26000	0	446	84000	0	0.0%	84
			>28000	0	0	>84000	1	0.7%	>84
			TOTAL	1032		TOTAL	137		

SUMMARY TOTALS

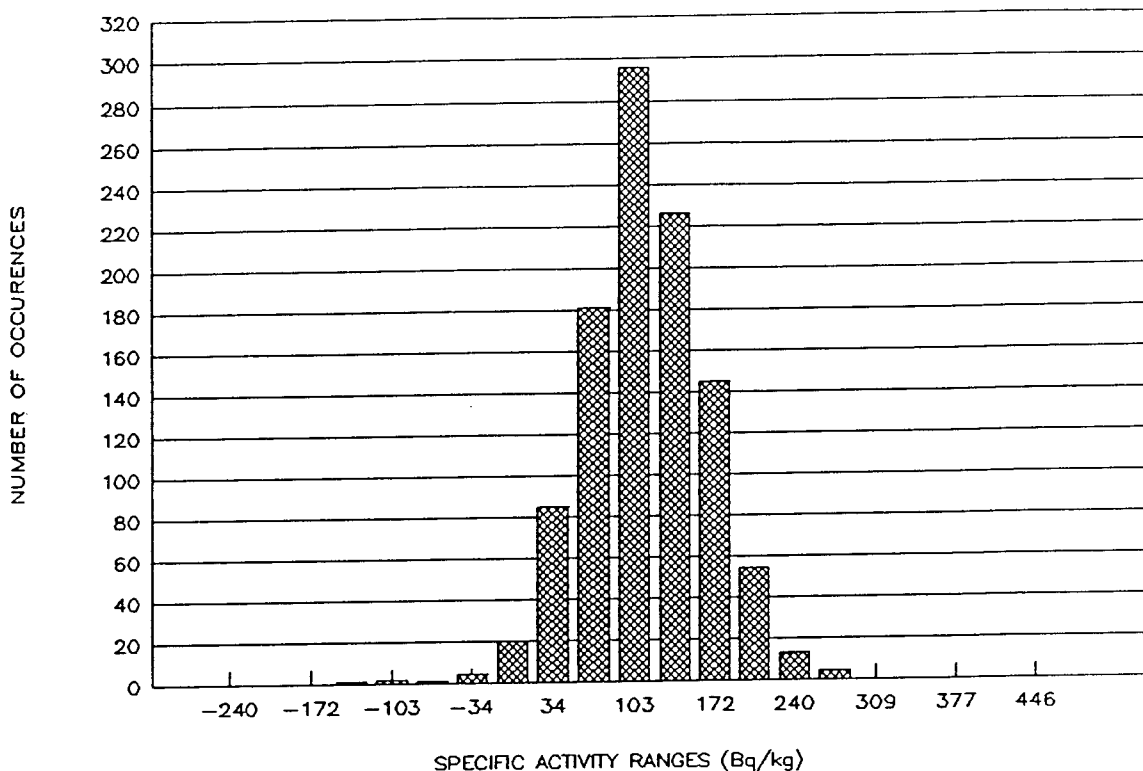
HOT PARTICLE EVENTS	131	SORTS BY ONE GATE ONLY	74
MULTIPARTICLE EVENTS	66	SORTS BY TWO GATES	63
DISTRIBUTED EVENTS	0		

REC CODE EXPLANATION

1.00 Source check (Soil on belt)
 2.00 Empty belt
 3.00 Test (No process soil)

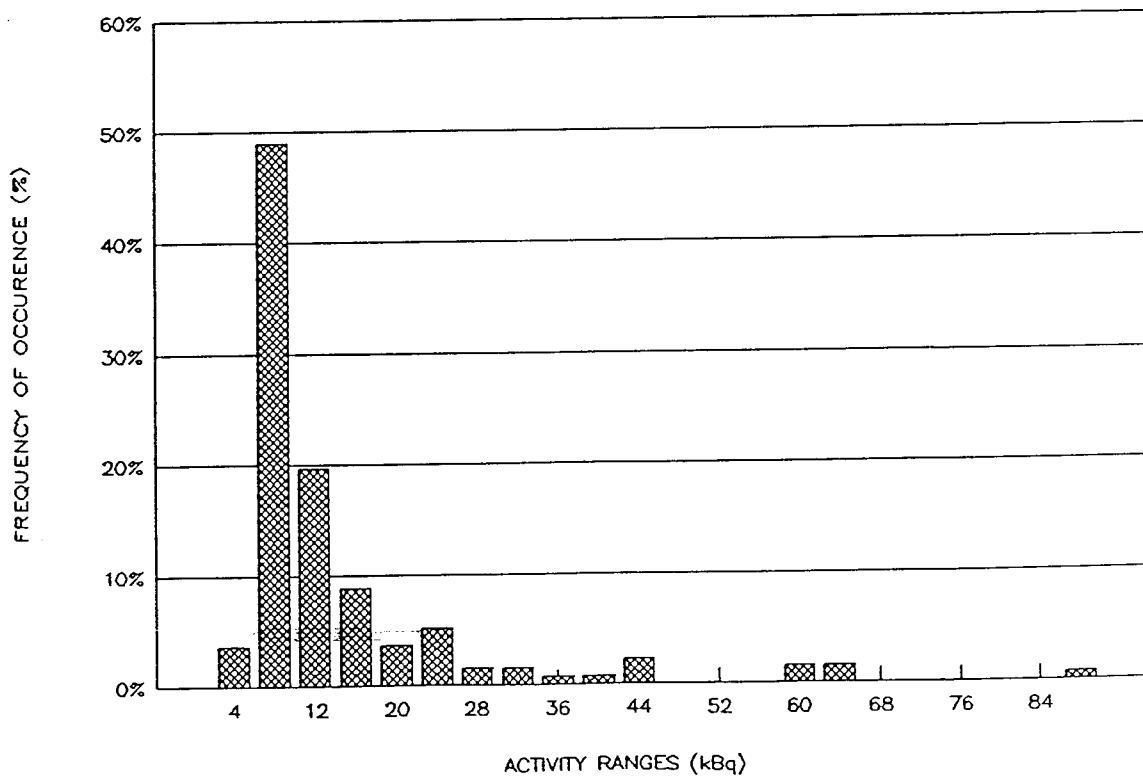
CLEAN SOIL SPECIFIC ACTIVITY

SORTER 2 LOG DATA FOR 30-Jun-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 30-Jun-93



JA SOIL CLEANUP PLANT LOG SUMMARY

SORTER 1 02-Jul-93

AVERAGE BACKGROUND COUNT RATE 0.73 ± 0.05 c/sec
 SORTER SOIL DENSITY 1.25 tons/m³
 GROUND SOIL DENSITY 1.65 tons/m³

	CONTAMINATED	CLEAN
MASS TOTAL	0.92 tons	68.4 tons
MAXIMUM/SORT	58.2 kg	58.2 kg
MINIMUM/SORT	0.7 kg	50.2 kg

WEIGHT RECOVERY OR VOLUME RECOVERY 98.7%
 EQUIVALENT SOIL-IN-GROUND 0.73 yd³ 54.2 yd³ 54.9 yd³/day

PARTICLE ACTIVITY (MAXIMUM ESTIMATE)
 TOTAL 18,518 kBq
 MAXIMUM/SORT 1,763 kBq
 MINIMUM/SORT 2.9 kBq

	6,387 kBq	8,790 kBq
DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY		
MAXIMUM/SORT	1202 kBq	21 kBq
MINIMUM/SORT	0 Bq	-3 kBq
SPECIFIC ACTIVITY	6,963 Bq/kg	129 Bq/kg

WORK HISTORY			
WORK DAY START	06:00 AM	WORK DAY END	04:30 PM
PLANT START-UP	09:00 AM	PLANT SHUT-DOWN	04:30 PM
START SOIL PROCESSING	09:27 AM	END SOIL PROCESSING	04:03 PM
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 hr

WORK HOURS	10.5 hr
AVAILABLE HOURS	7.5 hr
ACTUAL PROCESS HOURS (total 20-sec records)	6.61 hr
DOWN-TIME	0.89 hr
TOTAL SYSTEM PAUSE	0.00 hr
NONAVAILABLE HOURS	3.0 hr
START-UP	0.45 hr
SHUT-DOWN	0.44 hr
PLANT PERFORMANCE	88.1%
PRODUCTIVITY	63.0%

TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 2,011
 NONPROCESS RECORDS (Test, calibration, etc) 1

20-SEC PROCESS RECORDS	1,190
TOTAL SORT	1 MD>0 & MND=0
NO SORT	729 AD=0 & MD=0 & MND>0
SOME SORT	460 AD>0&0<MD<MNDmax&MND<MNDmax
UNEXPLAINED RECORDS	0
0<AD<1kBq & MD>0	0
AD=0 & MD	0
AD<0 & MD	0
ACT_P <5 kBq	173 21.1%

UNEXPLAIN	PAUSE
TIME	TIME
None	None

JA SOIL CLEANUP PLANT LOG SUMMARY

2-SEC COUNT PERIODS 11,900
 2-SEC RECORDS WITH SORTS 821 (ACT_P >0 kBq)
 2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR
 2 DETECTORS 171 79.9%
 3 DETECTORS 40 18.7%
 4 DETECTORS 3 1.4%
 5 DETECTORS 0 0.0%
 6 DETECTORS 0 0.0%
 7 DETECTORS 0 0.0%
 8 DETECTORS 0 0.0%
 TOTAL 214
 NET 2-SEC RECORDS WITH SORTS 607
 2-SEC PERIODS WITH NO SORTS 11,293
 AVG TIME BETWEEN 2-SEC SORTS 39.2 sec

1-GATE SORTS		426	ACT_NO	NUMBER	SPEC_A	ACT_P	SORT FREQ%		ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)		(kBq)
1	3	0.7%	-14000	0	-241	4000	49	6.0%	4
2	23	5.4%	-12000	0	-206	8000	378	46.0%	8
3	44	10.3%	-10000	0	-172	12000	140	17.1%	12
4	84	19.7%	-8000	0	-137	16000	71	8.6%	16
5	97	22.8%	-6000	0	-103	20000	29	3.5%	20
6	77	18.1%	-4000	0	-69	24000	23	2.8%	24
7	83	19.5%	-2000	3	-34	28000	14	1.7%	28
8	15	3.5%	0	17	0	32000	13	1.6%	32
TOTAL	426		2000	72	34	36000	15	1.8%	36
			4000	154	69	40000	9	1.1%	40
2-GATE SORTS		395	6000	218	103	44000	5	0.6%	44
DETECTR	SORTS	FREQ%	8000	230	137	48000	10	1.2%	48
8			10000	207	172	52000	12	1.5%	52
9	10	2.5%	12000	138	206	56000	1	0.1%	56
10	36	9.1%	14000	87	241	60000	2	0.2%	60
11	65	16.5%	16000	40	275	64000	10	1.2%	64
12	83	21.0%	18000	15	309	68000	3	0.4%	68
13	97	24.6%	20000	9	344	72000	4	0.5%	72
14	63	15.9%	22000	1	378	76000	0	0.0%	76
15	41	10.4%	24000	0	412	80000	1	0.1%	80
TOTAL	395		26000	0	447	84000	0	0.0%	84
			>28000	0	0	>84000	32	3.9%	>84
			TOTAL	1191		TOTAL	821		

SUMMARY TOTALS

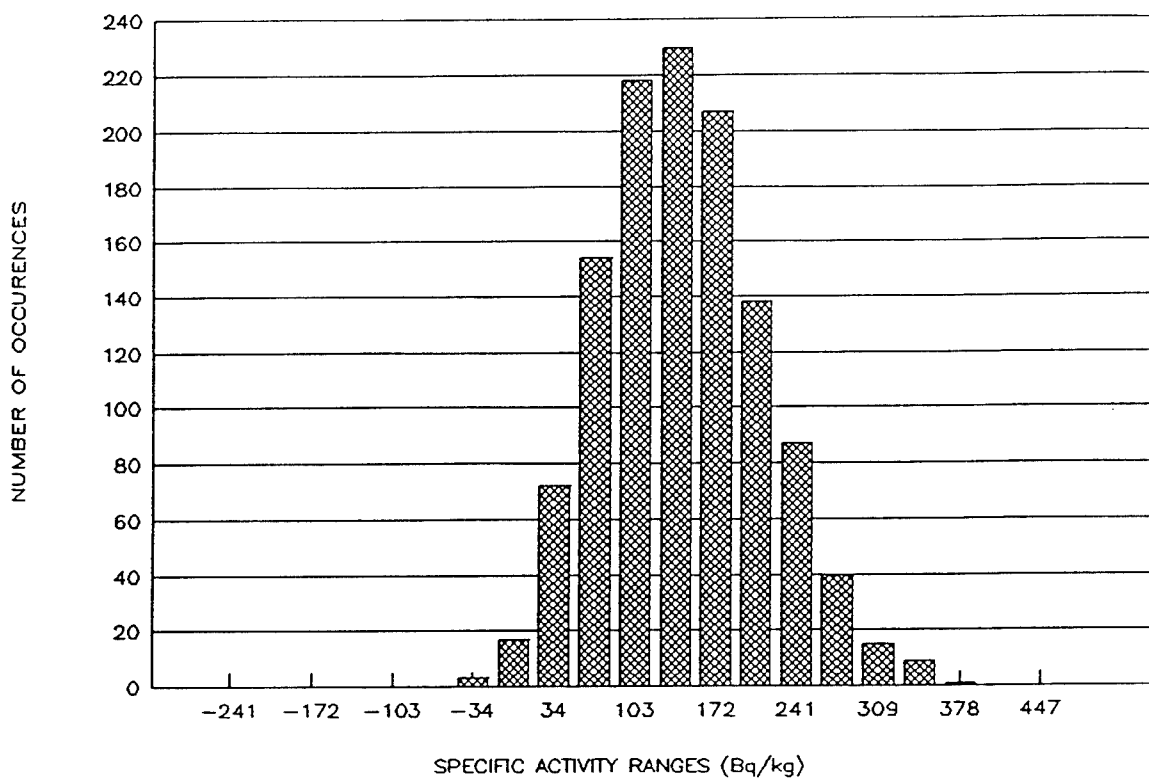
HOT PARTICLE EVENTS	798	SORTS BY ONE GATE ONLY	426
MULTIPARTICLE EVENTS	379	SORTS BY TWO GATES	395
DISTRIBUTED EVENTS	80		

REC CODE EXPLANATION

1.00 Source check (Soil on belt)
 2.00 Empty belt
 3.00 Test (No process soil)

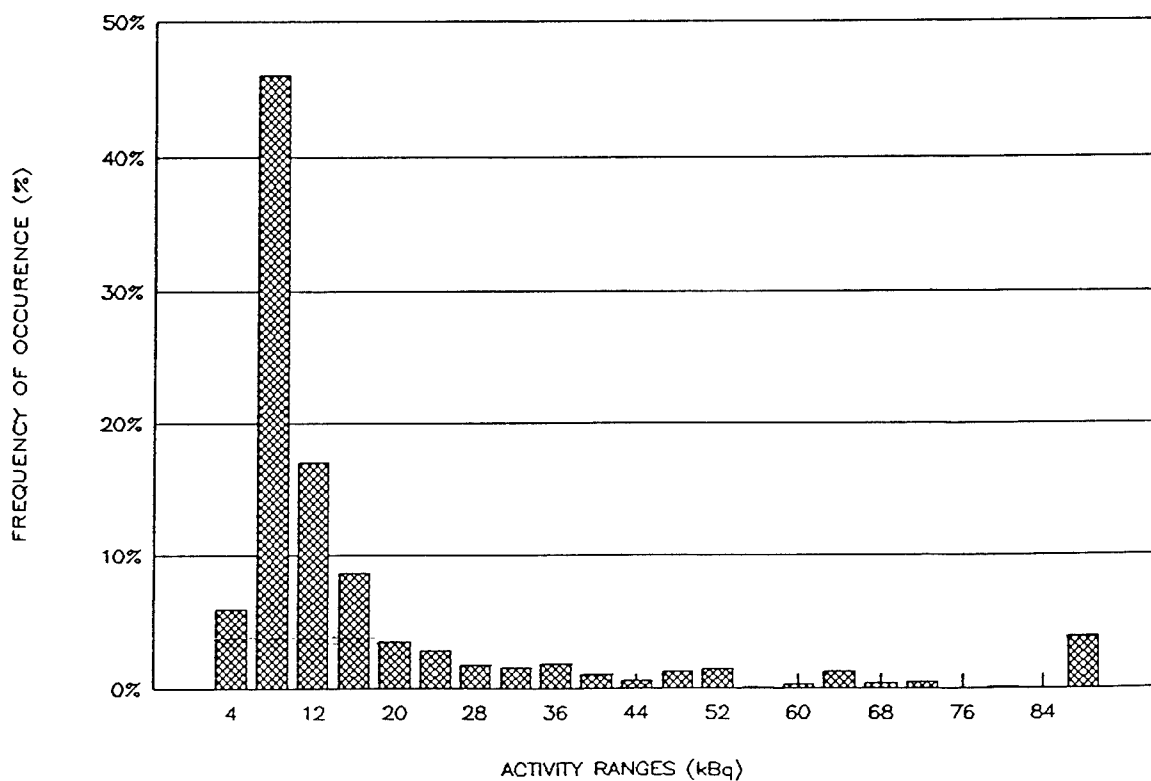
CLEAN SOIL SPECIFIC ACTIVITY

SORTER 1 LOG DATA FOR 02-JUL-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 02-JUL-93



JA SOIL CLEANUP PLANT LOG SUMMARY

SORTER 2 02-Jul-93

AVERAGE BACKGROUND COUNT RATE 0.80 ± 0.01 c/sec
 SORTER SOIL DENSITY 1.25 tons/m³
 GROUND SOIL DENSITY 1.65 tons/m³

	CONTAMINATED	CLEAN
MASS TOTAL	0.96 tons	67.9 tons
MAXIMUM/SORT	7.3 kg	58.3 kg
MINIMUM/SORT	0.7 kg	51 kg

WEIGHT RECOVERY OR VOLUME RECOVERY		98.6%
EQUIVALENT SOIL-IN-GROUND	0.76 yd ³	53.8 yd ³ 54.6 yd ³ /day

PARTICLE ACTIVITY (MAXIMUM ESTIMATE)

TOTAL	15,668 kBq
MAXIMUM/SORT	647 kBq
MINIMUM/SORT	2.7 kBq

DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY		
	5,699 kBq	4,792 kBq
MAXIMUM/SORT	342 kBq	20 kBq
MINIMUM/SORT	0 Bq	-10 kBq
SPECIFIC ACTIVITY	5,926 Bq/kg	71 Bq/kg

WORK HISTORY

WORK DAY START	06:00 AM
PLANT START-UP	09:00 AM
START SOIL PROCESSING	09:29 AM
LUNCH START	11:30 AM

WORK DAY END	04:30 PM
PLANT SHUT-DOWN	04:30 PM
END SOIL PROCESSING	04:02 PM
LUNCH PERIOD	0.0 hr

WORK HOURS	10.5 hr
AVAILABLE HOURS	7.5 hr
ACTUAL PROCESS HOURS (total 20-sec records)	6.56 hr
DOWN-TIME	0.94 hr
TOTAL SYSTEM PAUSE	0.01 hr
NONAVAILABLE HOURS	3.0 hr
START-UP	0.49 hr
SHUT-DOWN	0.45 hr
PLANT PERFORMANCE	87.5%
PRODUCTIVITY	62.5%

TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)	2,099
NONPROCESS RECORDS (Test, calibration, etc)	7

20-SEC PROCESS RECORDS

TOTAL SORT	0 MD>0 & MND=0
NO SORT	689 AD=0 & MD=0 & MND>0
SOME SORT	492 AD>0&0<MD<MNDmax&MND<MNDmax
UNEXPLAINED RECORDS	0

0<AD<1kBq & MD>0	2	UNEXPLAIN	PAUSE
AD=0 & MD	0	TIME	TIME
AD<0 & MD	0	12:19:52	13:10
ACT_P <5 kBq	137 14.9%	15:44:52	

JA SOIL CLEANUP PLANT LOG SUMMARY

2-SEC COUNT PERIODS

11,810

2-SEC RECORDS WITH SORTS

918 (ACT_P >0 kBq)

2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR

2 DETECTORS	198	83.5%
3 DETECTORS	36	15.2%
4 DETECTORS	3	1.3%
5 DETECTORS	0	0.0%
6 DETECTORS	0	0.0%
7 DETECTORS	0	0.0%
8 DETECTORS	0	0.0%

TOTAL 237

NET 2-SEC RECORDS WITH SORTS

681

2-SEC PERIODS WITH NO SORTS

11,129

AVG TIME BETWEEN 2-SEC SORTS

34.7 sec

1-GATE SORTS DETECTR	SORTS	474 FREQ%	ACT_NO (Bq)	NUMBER (#)	SPEC_A (Bq/kg)	ACT_P (Bq)	SORT FREQ%	ACT_P (kBq)
1	19	4.0%	-14000	0	-240	4000	44 4.8%	4
2	54	11.4%	-12000	0	-206	8000	420 45.8%	8
3	97	20.5%	-10000	1	-172	12000	164 17.9%	12
4	108	22.8%	-8000	1	-137	16000	91 9.9%	16
5	94	19.8%	-6000	9	-103	20000	32 3.5%	20
6	62	13.1%	-4000	27	-69	24000	29 3.2%	24
7	33	7.0%	-2000	65	-34	28000	16 1.7%	28
8	7	1.5%	0	131	0	32000	11 1.2%	32
TOTAL	474		2000	194	34	36000	9 1.0%	36
			4000	204	69	40000	14 1.5%	40
2-GATE SORTS		444	6000	204	103	44000	12 1.3%	44
DETECTR	SORTS	FREQ%	8000	117	137	48000	11 1.2%	48
8			10000	96	172	52000	10 1.1%	52
9	34	7.7%	12000	62	206	56000	2 0.2%	56
10	62	14.0%	14000	35	240	60000	5 0.5%	60
11	108	24.3%	16000	28	274	64000	2 0.2%	64
12	99	22.3%	18000	6	309	68000	4 0.4%	68
13	81	18.2%	20000	8	343	72000	5 0.5%	72
14	43	9.7%	22000	0	377	76000	1 0.1%	76
15	17	3.8%	24000	0	412	80000	5 0.5%	80
TOTAL	444		26000	0	446	84000	4 0.4%	84
			>28000	0	0	>84000	27 2.9%	>84
			TOTAL	1188		TOTAL	918	

SUMMARY TOTALS

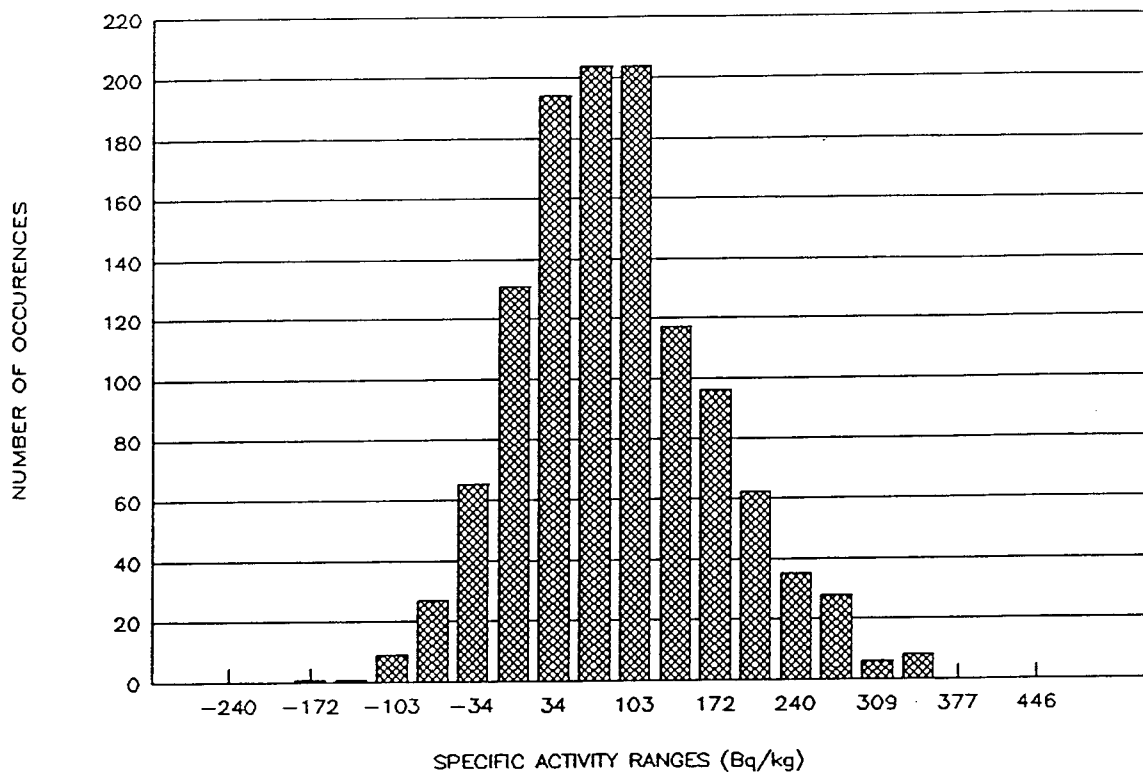
HOT PARTICLE EVENTS	902	SORTS BY ONE GATE ONLY	474
MULTIPARTICLE EVENTS	416	SORTS BY TWO GATES	444
DISTRIBUTED EVENTS	0		

REC CODE EXPLANATION

1.00 Source check (Soil on belt)
 2.00 Empty belt
 3.00 Test (No process soil)

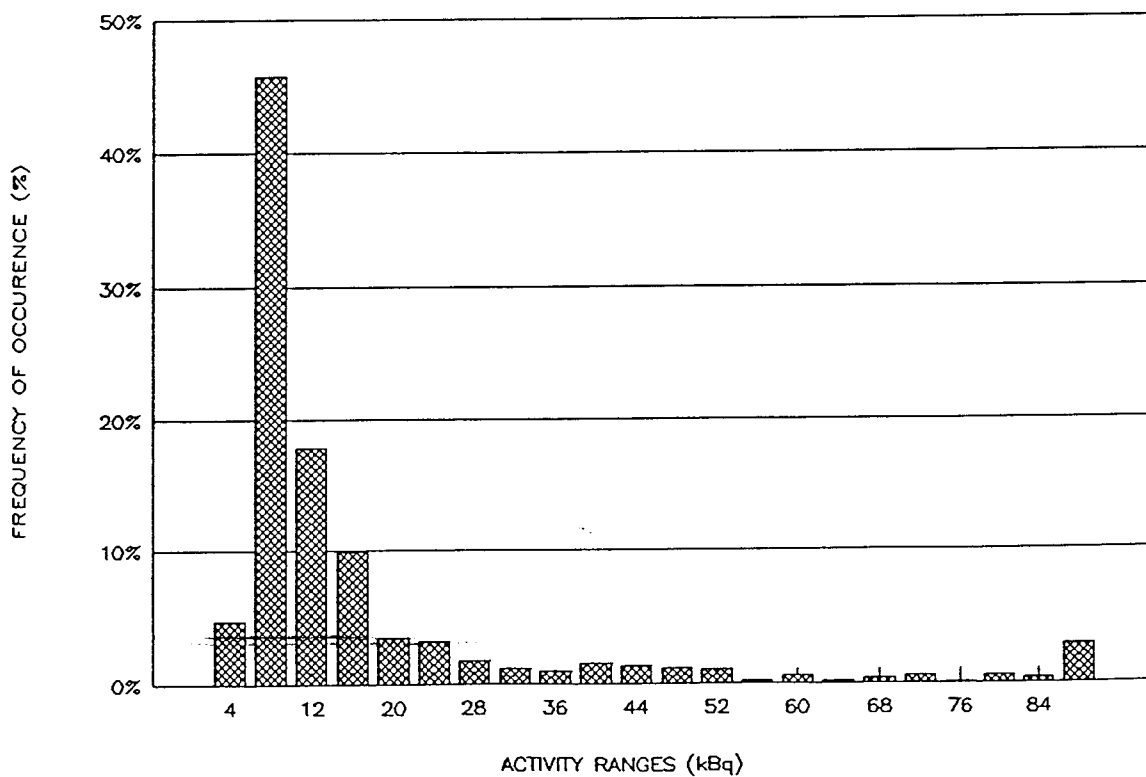
CLEAN SOIL SPECIFIC ACTIVITY

SORTER 2 LOG DATA FOR 02-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 02-Jul-93



JA SOIL CLEANUP PLANT LOG SUMMARY

SORTER 1 03-Jul-93

AVERAGE BACKGROUND COUNT RATE 0.74 ± 0.04 c/sec
 SORTER SOIL DENSITY 1.25 tons/m³
 GROUND SOIL DENSITY 1.65 tons/m³

	CONTAMINATED	CLEAN
MASS TOTAL	0.24 tons	65.9 tons
MAXIMUM/SORT	4.4 kg	58.2 kg
MINIMUM/SORT	0.7 kg	53.9 kg

WEIGHT RECOVERY OR VOLUME RECOVERY		99.6%
EQUIVALENT SOIL-IN-GROUND	0.19 yd ³	52.2 yd ³ 52.4 yd ³ /day

PARTICLE ACTIVITY (MAXIMUM ESTIMATE)

TOTAL	6,592 kBq
MAXIMUM/SORT	717 kBq
MINIMUM/SORT	3.1 kBq

DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY	2,152 kBq	4,499 kBq
MAXIMUM/SORT	467 kBq	15 kBq
MINIMUM/SORT	0 Bq	-6 kBq
SPECIFIC ACTIVITY	9,096 Bq/kg	68 Bq/kg

WORK HISTORY

WORK DAY START	05:00 AM	WORK DAY END	04:30 PM
PLANT START-UP	05:00 AM	PLANT SHUT-DOWN	12:00 PM
START SOIL PROCESSING	05:23 AM	END SOIL PROCESSING	11:42 AM
LUNCH START	11:30 AM	LUNCH PERIOD	0.5 hr

WORK HOURS	11.0 hr
AVAILABLE HOURS	6.5 hr
ACTUAL PROCESS HOURS (total 20-sec records)	6.31 hr
DOWN-TIME	0.19 hr
TOTAL SYSTEM PAUSE	0.00 hr
NONAVAILABLE HOURS	4.5 hr
START-UP	0.40 hr
SHUT-DOWN	0.30 hr
PLANT PERFORMANCE	97.1%
PRODUCTIVITY	57.4%

TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 1,367

NONPROCESS RECORDS (Test, calibration, etc) 7

20-SEC PROCESS RECORDS 1,136

TOTAL SORT	0 MD>0 & MND=0
NO SORT	970 AD=0 & MD=0 & MND>0
SOME SORT	166 AD>0&0<MD<MNDmax&MND<MNDmax
UNEXPLAINED RECORDS	0

0<AD<1kBq & MD>0	1	UNEXPLAIN	PAUSE
AD=0 & MD	0	TIME	TIME
AD<0 & MD	0	07:59:32	None
ACT_P <5 kBq	50	21.6%	

JA SOIL CLEANUP PLANT LOG SUMMARY

2-SEC COUNT PERIODS 11,360
 2-SEC RECORDS WITH SORTS 231 (ACT_P >0 kBq)
 2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR

2 DETECTORS	57	79.2%
3 DETECTORS	12	16.7%
4 DETECTORS	3	4.2%
5 DETECTORS	0	0.0%
6 DETECTORS	0	0.0%
7 DETECTORS	0	0.0%
8 DETECTORS	0	0.0%
TOTAL	72	

NET 2-SEC RECORDS WITH SORTS 159
 2-SEC PERIODS WITH NO SORTS 11,201
 AVG TIME BETWEEN 2-SEC SORTS 142.9 sec

1-GATE SORTS	116	ACT_NO	NUMBER	SPEC_A	ACT_P	SORT	FREQX	ACT_P	
DETECTR	SORTS	FREQX	(Bq)	(#)	(Bq/kg)	(Bq)	(#)	(kBq)	
1	1	0.9%	-14000	0	-241	4000	15	6.5%	4
2	5	4.3%	-12000	0	-206	8000	95	41.1%	8
3	11	9.5%	-10000	0	-172	12000	36	15.6%	12
4	24	20.7%	-8000	1	-137	16000	17	7.4%	16
5	29	25.0%	-6000	1	-103	20000	9	3.9%	20
6	27	23.3%	-4000	5	-69	24000	9	3.9%	24
7	17	14.7%	-2000	17	-34	28000	5	2.2%	28
8	2	1.7%	0	72	0	32000	5	2.2%	32
TOTAL	116		2000	203	34	36000	3	1.3%	36
			4000	288	69	40000	0	0.0%	40
			6000	286	103	44000	3	1.3%	44
2-GATE SORTS	115		8000	182	137	48000	2	0.9%	48
DETECTR	SORTS	FREQX	10000	70	172	52000	2	0.9%	52
8			12000	16	206	56000	4	1.7%	56
9	2	1.7%	14000	1	241	60000	5	2.2%	60
10	7	6.1%	16000	1	275	64000	3	1.3%	64
11	15	13.0%	18000	0	309	68000	2	0.9%	68
12	28	24.3%	20000	0	344	72000	1	0.4%	72
13	30	26.1%	22000	0	378	76000	1	0.4%	76
14	25	21.7%	24000	0	412	80000	0	0.0%	80
15	8	7.0%	26000	0	447	84000	2	0.9%	84
TOTAL	115		>28000	0	0	>84000	12	5.2%	>84
			TOTAL	1143		TOTAL	231		

SUMMARY TOTALS

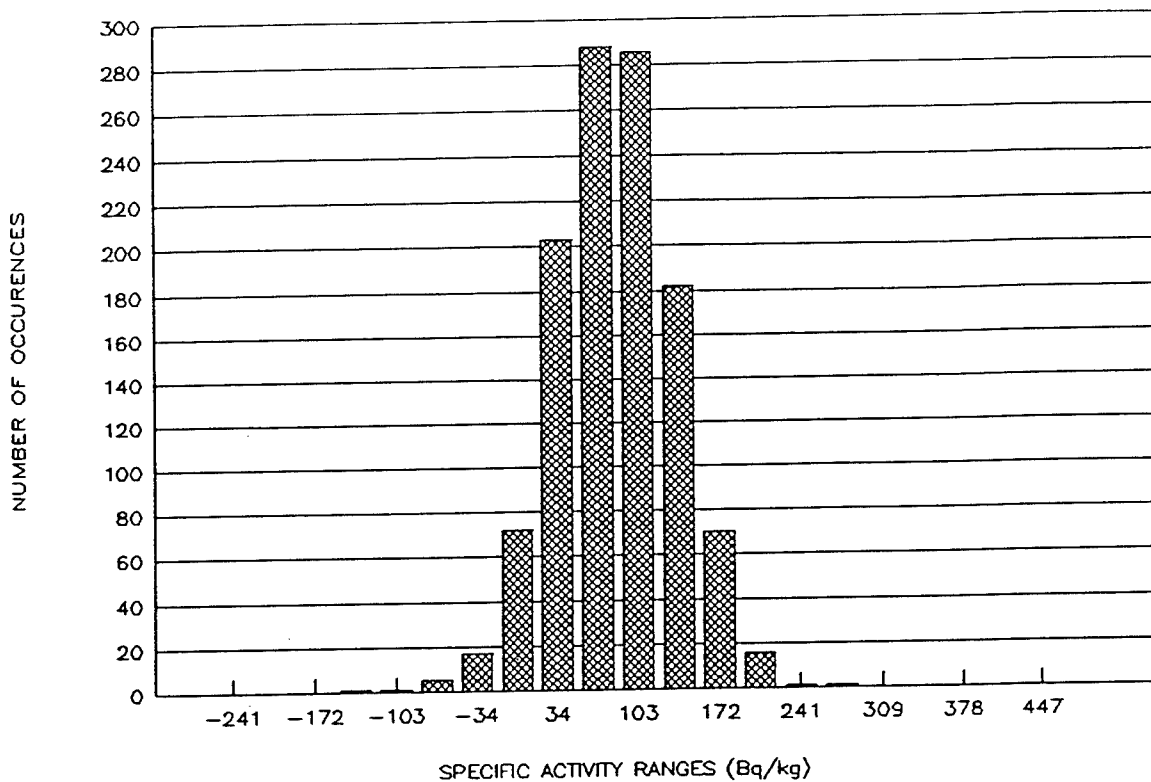
HOT PARTICLE EVENTS	224	SORTS BY ONE GATE ONLY	116
MULTIPARTICLE EVENTS	100	SORTS BY TWO GATES	115
DISTRIBUTED EVENTS	0		

REC CODE EXPLANATION

1.00 Source check (Soil on belt)
 2.00 Empty belt
 3.00 Test (No process soil)

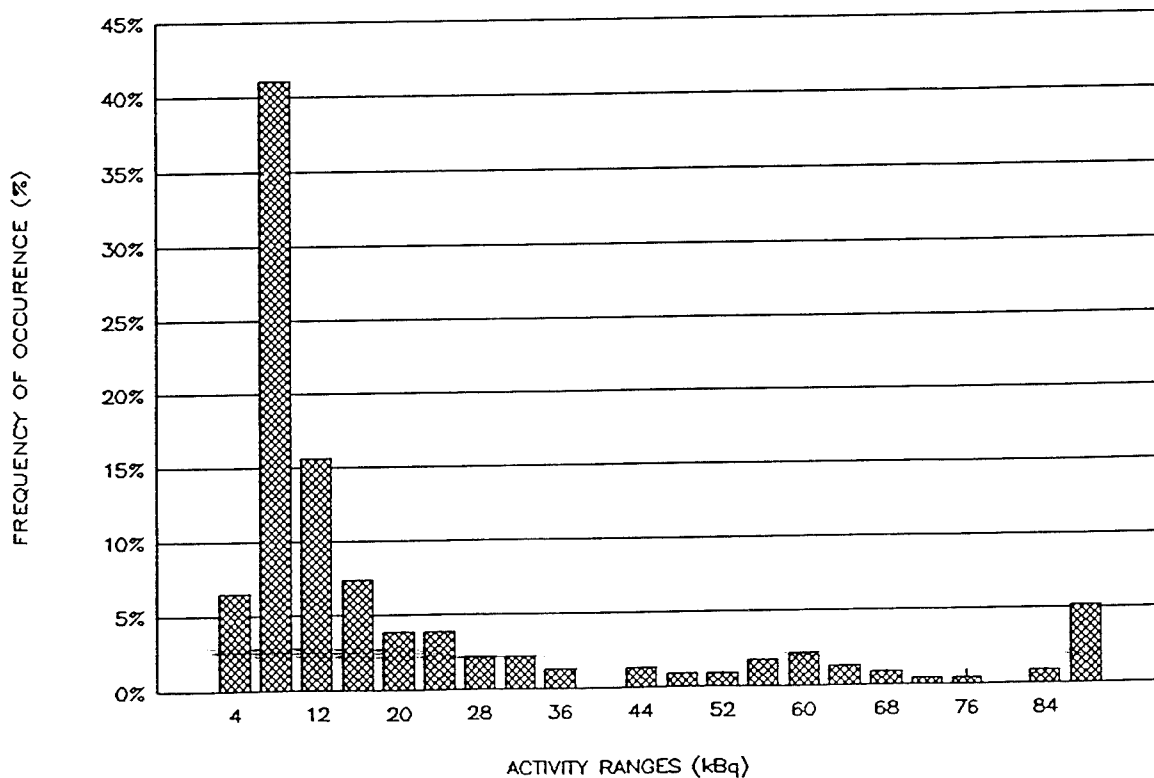
CLEAN SOIL SPECIFIC ACTIVITY

SORTER 1 LOG DATA FOR 03-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 03-Jul-93



JA SOIL CLEANUP PLANT LOG SUMMARY

SORTER 2 03-Jul-93

AVERAGE BACKGROUND COUNT RATE 0.80 ± 0.01 c/sec
 SORTER SOIL DENSITY 1.25 tons/m³
 GROUND SOIL DENSITY 1.65 tons/m³

	CONTAMINATED	CLEAN
MASS TOTAL	0.24 tons	65.8 tons
MAXIMUM/SORT	5.1 kg	58.3 kg
MINIMUM/SORT	0.7 kg	53.2 kg

WEIGHT RECOVERY OR VOLUME RECOVERY		99.6%
EQUIVALENT SOIL-IN-GROUND	0.19 yd ³	52.2 yd ³ 52.4 yd ³ /day

PARTICLE ACTIVITY (MAXIMUM ESTIMATE)

TOTAL	4,257 kBq
MAXIMUM/SORT	184 kBq
MINIMUM/SORT	2.9 kBq

DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY

	1,451 kBq	(686)kBq
MAXIMUM/SORT	104 kBq	12 kBq
MINIMUM/SORT	0 Bq	-10 kBq
SPECIFIC ACTIVITY	6,170 Bq/kg	(10)Bq/kg

WORK HISTORY

WORK DAY START	05:00 AM	WORK DAY END	04:30 PM
PLANT START-UP	05:00 AM	PLANT SHUT-DOWN	12:00 PM
START SOIL PROCESSING	05:23 AM	END SOIL PROCESSING	11:40 AM
LUNCH START	11:30 AM	LUNCH PERIOD	0.5 hr

WORK HOURS	11.0 hr
AVAILABLE HOURS	6.5 hr
ACTUAL PROCESS HOURS (total 20-sec records)	6.29 hr
DOWN-TIME	0.21 hr
TOTAL SYSTEM PAUSE	0.00 hr
NONAVAILABLE HOURS	4.5 hr
START-UP	0.39 hr
SHUT-DOWN	0.32 hr
PLANT PERFORMANCE	96.8%
PRODUCTIVITY	57.2%

TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 1,369

NONPROCESS RECORDS (Test, calibration, etc) 10

20-SEC PROCESS RECORDS

1,133

TOTAL SORT	0 MD>0 & MND=0
NO SORT	970 AD=0 & MD=0 & MND>0
SOME SORT	163 AD>0&0<MD<MNDmax&MND<MNDmax
UNEXPLAINED RECORDS	0

0<AD<1kBq & MD>0	0	UNEXPLAIN	PAUSE
AD=0 & MD	0	TIME	TIME
AD<0 & MD	0	None	None

ACT_P <5 kBq 32 13.6%

JA SOIL CLEANUP PLANT LOG SUMMARY

2-SEC COUNT PERIODS 11,330
 2-SEC RECORDS WITH SORTS 236 (ACT_P >0 kBq)
 2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR
 2 DETECTORS 68 87.2%
 3 DETECTORS 9 11.5%
 4 DETECTORS 1 1.3%
 5 DETECTORS 0 0.0%
 6 DETECTORS 0 0.0%
 7 DETECTORS 0 0.0%
 8 DETECTORS 0 0.0%
 TOTAL 78
 NET 2-SEC RECORDS WITH SORTS 158
 2-SEC PERIODS WITH NO SORTS 11,172
 AVG TIME BETWEEN 2-SEC SORTS 143.4 sec

1-GATE SORTS		127	ACT_MD	NUMBER	SPEC_A	ACT_P	SORT FREQ%		ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)		(kBq)
1	1	0.8%	-14000	2	-240	4000	12	5.1%	4
2	13	10.2%	-12000	0	-206	8000	78	33.1%	8
3	21	16.5%	-10000	1	-172	12000	41	17.4%	12
4	31	24.4%	-8000	4	-137	16000	25	10.6%	16
5	30	23.6%	-6000	26	-103	20000	15	6.4%	20
6	21	16.5%	-4000	122	-69	24000	16	6.8%	24
7	8	6.3%	-2000	232	-34	28000	9	3.8%	28
8	2	1.6%	0	289	0	32000	4	1.7%	32
TOTAL	127		2000	247	34	36000	7	3.0%	36
			4000	141	69	40000	4	1.7%	40
2-GATE SORTS		109	6000	60	103	44000	6	2.5%	44
DETECTR	SORTS	FREQ%	8000	14	137	48000	1	0.4%	48
8			10000	4	172	52000	2	0.8%	52
9	4	3.7%	12000	1	206	56000	0	0.0%	56
10	12	11.0%	14000	0	240	60000	4	1.7%	60
11	21	19.3%	16000	0	274	64000	1	0.4%	64
12	29	26.6%	18000	0	309	68000	3	1.3%	68
13	24	22.0%	20000	0	343	72000	4	1.7%	72
14	16	14.7%	22000	0	377	76000	1	0.4%	76
15	3	2.8%	24000	0	412	80000	1	0.4%	80
TOTAL	109		26000	0	446	84000	0	0.0%	84
			>28000	0	0	>84000	2	0.8%	>84
			TOTAL	1143		TOTAL	236		

SUMMARY TOTALS

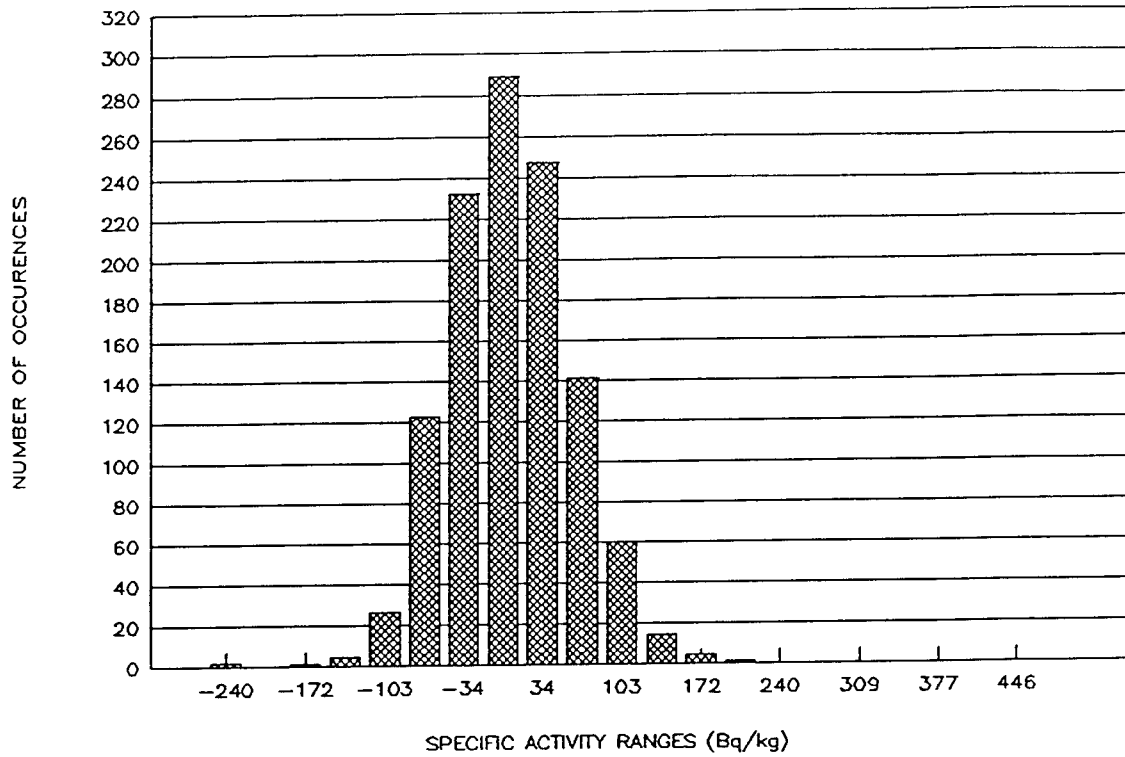
HOT PARTICLE EVENTS	215	SORTS BY ONE GATE ONLY	127
MULTIPARTICLE EVENTS	108	SORTS BY TWO GATES	109
DISTRIBUTED EVENTS	0		

REC CODE EXPLANATION

1.00 Source check (Soil on belt)
 2.00 Empty belt
 3.00 Test (No process soil)

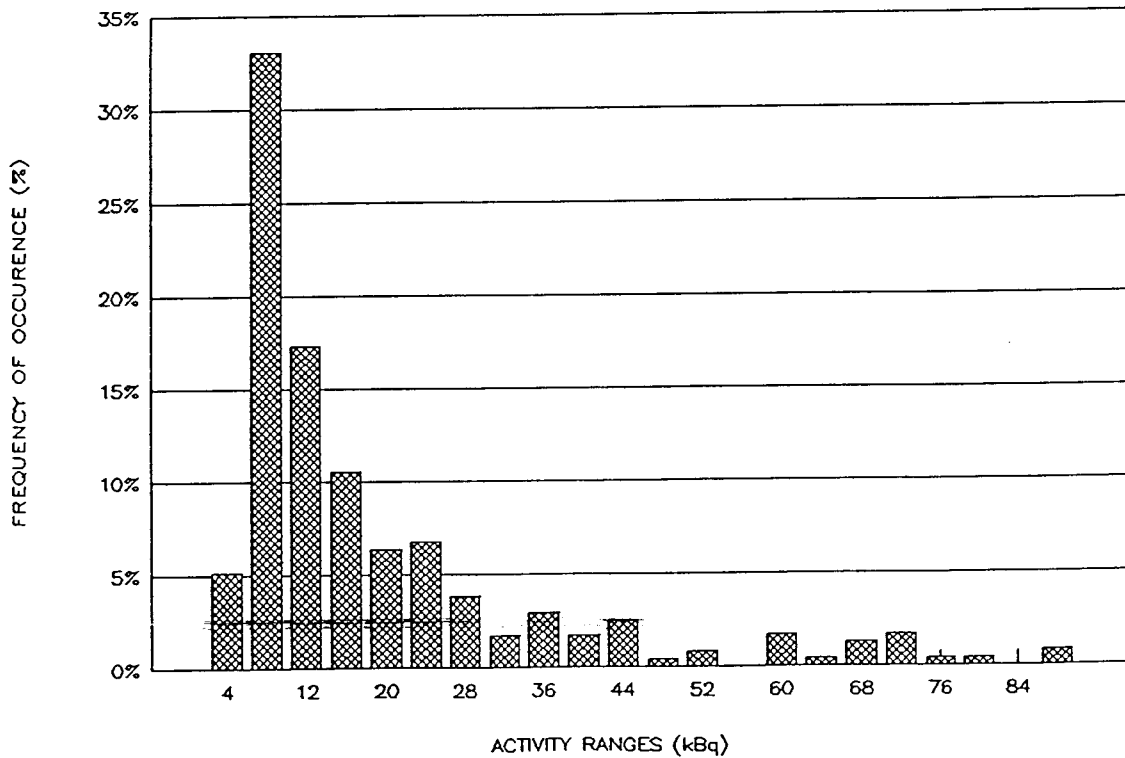
CLEAN SOIL SPECIFIC ACTIVITY

SORTER 2 LOG DATA FOR 03-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 03-Jul-93



JA SOIL CLEANUP PLANT LOG SUMMARY

SORTER 4 05-Jul-93

AVERAGE BACKGROUND COUNT RATE 0.71 ± 0.04 c/sec
 SORTER SOIL DENSITY 1.4 tons/m³
 GROUND SOIL DENSITY 1.65 tons/m³

	CONTAMINATED	CLEAN
MASS TOTAL	0.21 tons	116.0 tons
MAXIMUM/SORT	4.1 kg	65.2 kg
MINIMUM/SORT	0.8 kg	61.2 kg

WEIGHT RECOVERY OR VOLUME RECOVERY		99.8%
EQUIVALENT SOIL-IN-GROUND	0.17 yd ³	92.0 yd ³ 92.2 yd ³ /day

PARTICLE ACTIVITY (MAXIMUM ESTIMATE)

TOTAL	3,276 kBq
MAXIMUM/SORT	89 kBq
MINIMUM/SORT	3.7 kBq

DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY	1,378 kBq	9,906 kBq
MAXIMUM/SORT	56 kBq	24 kBq
MINIMUM/SORT	0 Bq	-7 kBq
SPECIFIC ACTIVITY	6,540 Bq/kg	85 Bq/kg

WORK HISTORY

WORK DAY START	05:00 AM	WORK DAY END	04:30 PM
PLANT START-UP	05:00 AM	PLANT SHUT-DOWN	04:30 PM
START SOIL PROCESSING	05:59 AM	END SOIL PROCESSING	03:58 PM
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 hr

WORK HOURS	11.5 hr
AVAILABLE HOURS	11.5 hr
ACTUAL PROCESS HOURS (total 20-sec records)	9.91 hr
DOWN-TIME	1.59 hr
TOTAL SYSTEM PAUSE	0.06 hr
NONAVAILABLE HOURS	0.0 hr
START-UP	0.99 hr
SHUT-DOWN	0.53 hr
PLANT PERFORMANCE	86.1%
PRODUCTIVITY	86.1%

TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 1,933

NONPROCESS RECORDS (Test, calibration, etc) 8

20-SEC PROCESS RECORDS

1,783

TOTAL SORT	0 MD>0 & MND=0
NO SORT	1,602 AD=0 & MD=0 & MND>0
SOME SORT	181 AD>0&0<MD<MNDmax&MND<MNDmax
UNEXPLAINED RECORDS	0

	UNEXPLAIN	PAUSE
	TIME	TIME
0<AD<1kBq & MD>0	0	
AD=0 & MD	0	
AD<0 & MD	0	
ACT_P <5 kBq	13	8.7%
	None	14:50

JA SOIL CLEANUP PLANT LOG SUMMARY

2-SEC COUNT PERIODS 17,830
 2-SEC RECORDS WITH SORTS 150 (ACT_P >0 kBq)
 2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR
 2 DETECTORS 38 84.4%
 3 DETECTORS 7 15.6%
 4 DETECTORS 0 0.0%
 5 DETECTORS 0 0.0%
 6 DETECTORS 0 0.0%
 7 DETECTORS 0 0.0%
 8 DETECTORS 0 0.0%
 TOTAL 45
 NET 2-SEC RECORDS WITH SORTS 105
 2-SEC PERIODS WITH NO SORTS 17,725
 AVG TIME BETWEEN 2-SEC SORTS 339.6 sec

1-GATE SORTS	94	ACT_NO	NUMBER	SPEC_A	ACT_P	SORT FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(#)	(Bq/kg)	(Bq)	(#)	(kBq)
1	37	39.4%	-14000	0	-215	4000	4 2.7%
2	17	18.1%	-12000	0	-184	8000	57 38.0%
3	15	16.0%	-10000	1	-153	12000	27 18.0%
4	10	10.6%	-8000	2	-123	16000	14 9.3%
5	5	5.3%	-6000	3	-92	20000	5 3.3%
6	3	3.2%	-4000	6	-61	24000	3 2.0%
7	5	5.3%	-2000	20	-31	28000	2 1.3%
8	2	2.1%	0	63	0	32000	1 0.7%
TOTAL	94		2000	185	31	36000	4 2.7%
			4000	307	61	40000	2 1.3%
2-GATE SORTS	56	6000	409	92	44000	2 1.3%	44
DETECTR	SORTS	FREQ%	8000	372	123	48000	2 1.3%
8			10000	233	153	52000	3 2.0%
9	10	17.9%	12000	126	184	56000	2 1.3%
10	14	25.0%	14000	42	215	60000	2 1.3%
11	14	25.0%	16000	14	245	64000	4 2.7%
12	4	7.1%	18000	5	276	68000	3 2.0%
13	5	8.9%	20000	2	307	72000	6 4.0%
14	5	8.9%	22000	0	337	76000	1 0.7%
15	4	7.1%	24000	1	368	80000	2 1.3%
TOTAL	56		26000	0	399	84000	2 1.3%
			>28000	0	0	>84000	2 1.3%
			TOTAL	1791		TOTAL	150

SUMMARY TOTALS

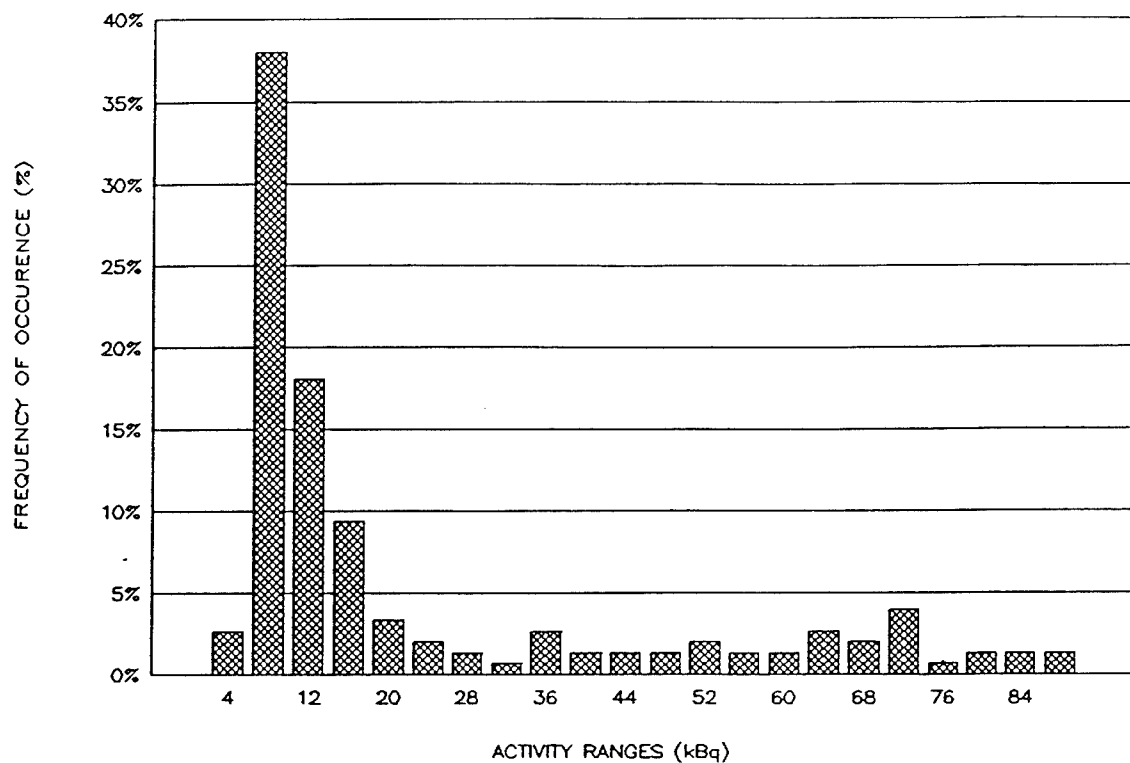
HOT PARTICLE EVENTS	141	SORTS BY ONE GATE ONLY	94
MULTIPARTICLE EVENTS	121	SORTS BY TWO GATES	56
DISTRIBUTED EVENTS	0		

REC CODE EXPLANATION

1.00 Source check (Soil on belt)
 2.00 Empty belt
 3.00 Test (No process soil)

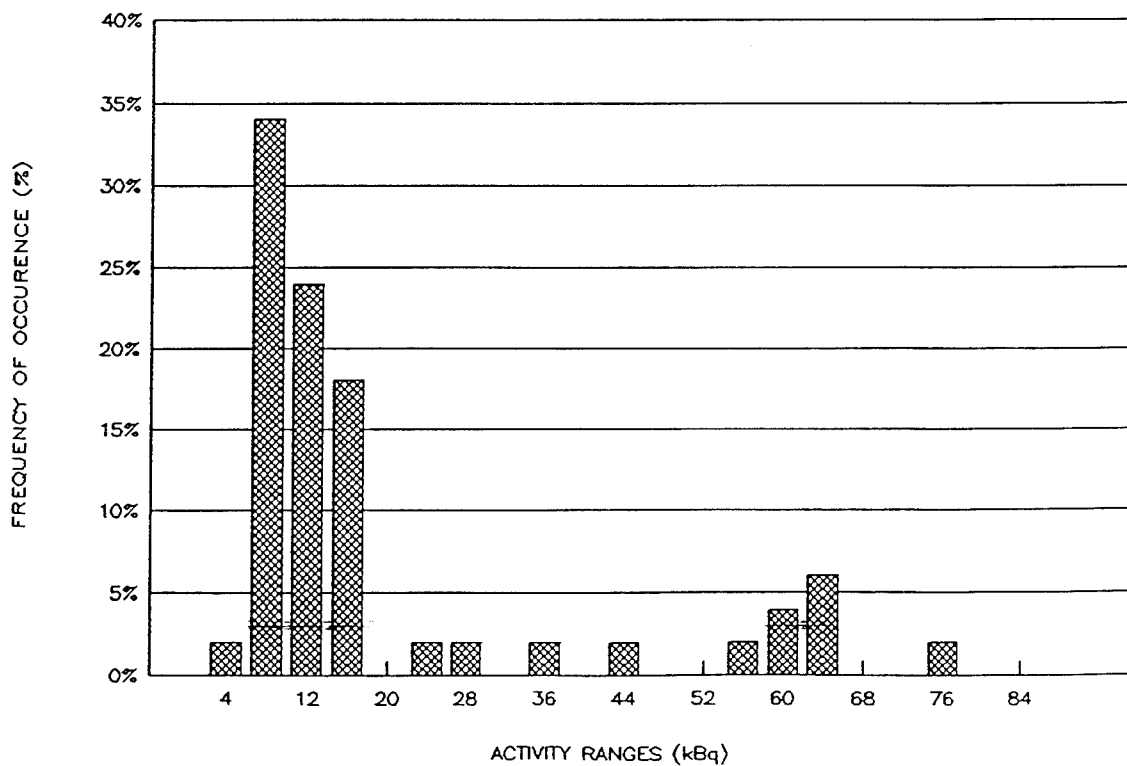
JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 4 LOG DATA FOR 05-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 4 LOG DATA FOR 06-Jul-93



JA SOIL CLEANUP PLANT LOG SUMMARY

SORTER 1 06-Jul-93

AVERAGE BACKGROUND COUNT RATE 0.68 ± 0.04 c/sec
 SORTER SOIL DENSITY 1.25 tons/m³
 GROUND SOIL DENSITY 1.65 tons/m³

	CONTAMINATED	CLEAN
MASS TOTAL	0.14 tons	30.4 tons
MAXIMUM/SORT	61.1 kg	58.2 kg
MINIMUM/SORT	0.7 kg	54.6 kg

WEIGHT RECOVERY OR VOLUME RECOVERY		99.5%
EQUIVALENT SOIL-IN-GROUND	0.11 yd ³	24.1 yd ³ 24.2 yd ³ /day

PARTICLE ACTIVITY (MAXIMUM ESTIMATE)

TOTAL	375 kBq
MAXIMUM/SORT	59 kBq
MINIMUM/SORT	3.5 kBq

DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY

	169 kBq	2,337 kBq
MAXIMUM/SORT	38 kBq	13 kBq
MINIMUM/SORT	0 Bq	-3 kBq
SPECIFIC ACTIVITY	1,170 Bq/kg	77 Bq/kg

WORK HISTORY

WORK DAY START	05:00 AM
PLANT START-UP	12:30 PM
START SOIL PROCESSING	12:46 PM
LUNCH START	11:30 AM

WORK DAY END	04:30 PM
PLANT SHUT-DOWN	04:30 PM
END SOIL PROCESSING	03:55 PM
LUNCH PERIOD	0.5 hr

WORK HOURS	11.0 hr
AVAILABLE HOURS	4.0 hr
ACTUAL PROCESS HOURS (total 20-sec records)	2.91 hr
DOWN-TIME	1.09 hr
TOTAL SYSTEM PAUSE	0.25 hr
NONAVAILABLE HOURS	7.0 hr
START-UP	0.27 hr
SHUT-DOWN	0.58 hr
PLANT PERFORMANCE	72.8%
PRODUCTIVITY	26.5%

TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 544

NONPROCESS RECORDS (Test, calibration, etc) 6

20-SEC PROCESS RECORDS

TOTAL SORT	524	2 MD>0 & MND=0
NO SORT	500	AD=0 & MD=0 & MND>0
SOME SORT	22	AD>0&0<MD<MNDmax&MND<MNDmax
UNEXPLAINED RECORDS	0	
0<AD<1kBq & MD>0	0	UNEXPLAIN PAUSE
AD=0 & MD	0	TIME TIME
AD<0 & MD	0	None 13:24
ACT_P <5 kBq	3	15.0%

JA SOIL CLEANUP PLANT LOG SUMMARY

2-SEC COUNT PERIODS 5,240
 2-SEC RECORDS WITH SORTS 20 (ACT_P >0 kBq)
 2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR
 2 DETECTORS 6 85.7%
 3 DETECTORS 1 14.3%
 4 DETECTORS 0 0.0%
 5 DETECTORS 0 0.0%
 6 DETECTORS 0 0.0%
 7 DETECTORS 0 0.0%
 8 DETECTORS 0 0.0%
 TOTAL 7
 NET 2-SEC RECORDS WITH SORTS 13
 2-SEC PERIODS WITH NO SORTS 5,227
 AVG TIME BETWEEN 2-SEC SORTS 806.2 sec

1-GATE SORTS		10	ACT_ND	NUMBER	SPEC_A	ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)		(kBq)
1	1	10.0%	-14000	0	-241	4000	2	10.0%	4
2	1	10.0%	-12000	0	-206	8000	5	25.0%	8
3	0	0.0%	-10000	0	-172	12000	1	5.0%	12
4	1	10.0%	-8000	0	-137	16000	3	15.0%	16
5	4	40.0%	-6000	1	-103	20000	1	5.0%	20
6	2	20.0%	-4000	1	-69	24000	3	15.0%	24
7	1	10.0%	-2000	5	-34	28000	1	5.0%	28
8	0	0.0%	0	21	0	32000	0	0.0%	32
TOTAL	10		2000	78	34	36000	1	5.0%	36
			4000	128	69	40000	0	0.0%	40
2-GATE SORTS		10	6000	160	103	44000	1	5.0%	44
DETECTR	SORTS	FREQ%	8000	77	137	48000	0	0.0%	48
8			10000	46	172	52000	1	5.0%	52
9	1	10.0%	12000	10	206	56000	0	0.0%	56
10	0	0.0%	14000	3	241	60000	1	5.0%	60
11	1	10.0%	16000	0	275	64000	0	0.0%	64
12	3	30.0%	18000	0	309	68000	0	0.0%	68
13	2	20.0%	20000	0	344	72000	0	0.0%	72
14	3	30.0%	22000	0	378	76000	0	0.0%	76
15	0	0.0%	24000	0	412	80000	0	0.0%	80
TOTAL	10		26000	0	447	84000	0	0.0%	84
			>28000	0	0	>84000	0	0.0%	>84
			TOTAL	530		TOTAL	20		

SUMMARY TOTALS

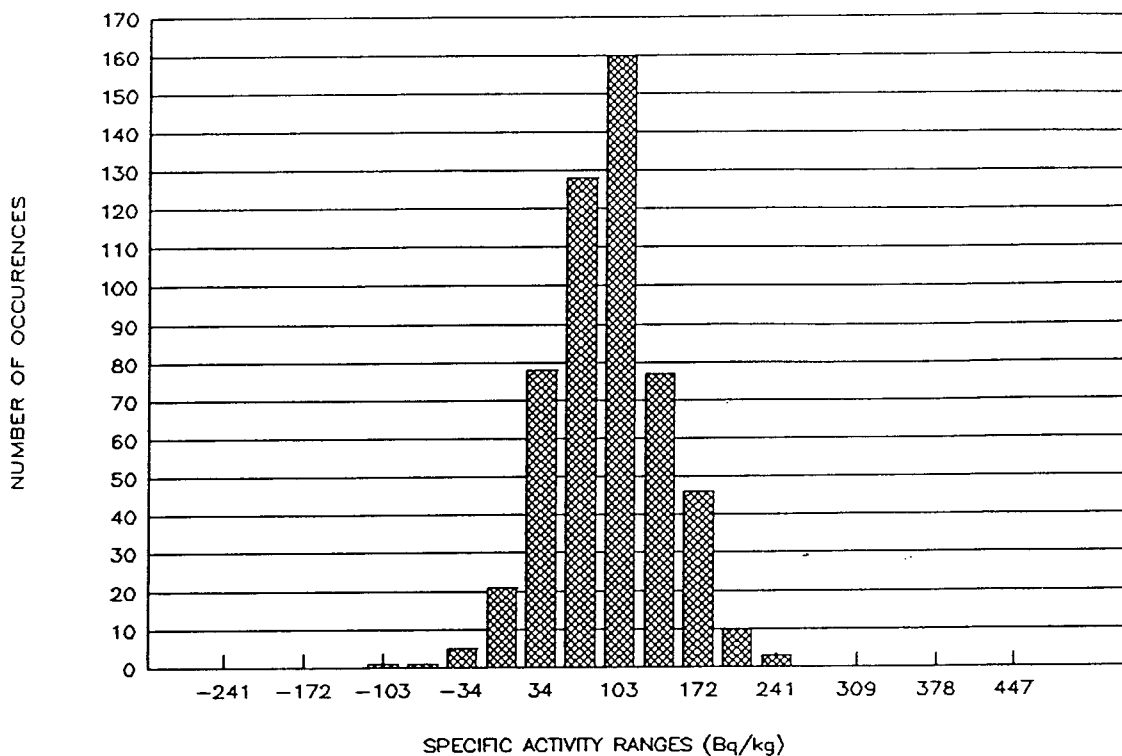
HOT PARTICLE EVENTS	20	SORTS BY ONE GATE ONLY	10
MULTIPARTICLE EVENTS	15	SORTS BY TWO GATES	10
DISTRIBUTED EVENTS	163		

REC CODE EXPLANATION

1.00 Source check (Soil on belt)
 2.00 Empty belt
 3.00 Test (No process soil)

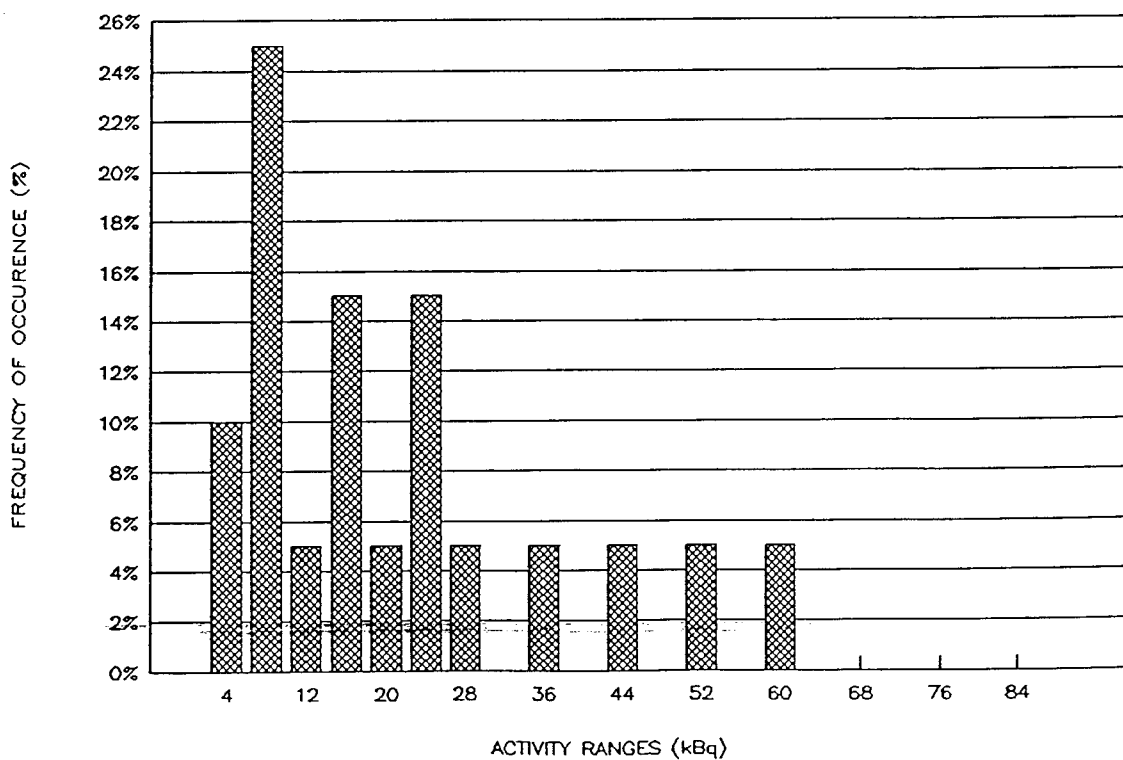
CLEAN SOIL SPECIFIC ACTIVITY

SORTER 1 LOG DATA FOR 06-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 06-Jul-93



JA SOIL CLEANUP PLANT LOG SUMMARY

SORTER 2 06-Jul-93

AVERAGE BACKGROUND COUNT RATE 0.75 ± 0.05 c/sec
 SORTER SOIL DENSITY 1.25 tons/m³
 GROUND SOIL DENSITY 1.65 tons/m³

	CONTAMINATED	CLEAN
MASS TOTAL	0.09 tons	30.6 tons
MAXIMUM/SORT	61.3 kg	58.3 kg
MINIMUM/SORT	0.7 kg	54.6 kg

WEIGHT RECOVERY OR VOLUME RECOVERY		99.7%
EQUIVALENT SOIL-IN-GROUND	0.07 yd ³	24.3 yd ³ 24.4 yd ³ /day

PARTICLE ACTIVITY (MAXIMUM ESTIMATE)

TOTAL	429 kBq
MAXIMUM/SORT	65 kBq
MINIMUM/SORT	3.4 kBq

DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY	157 kBq	1,572 kBq
MAXIMUM/SORT	36 kBq	11 kBq
MINIMUM/SORT	0 Bq	-8 kBq
SPECIFIC ACTIVITY	1,708 Bq/kg	51 Bq/kg

WORK HISTORY

WORK DAY START	05:00 AM
PLANT START-UP	12:30 PM
START SOIL PROCESSING	12:46 PM
LUNCH START	11:30 AM

WORK DAY END	04:30 PM
PLANT SHUT-DOWN	04:30 PM
END SOIL PROCESSING	03:57 PM
LUNCH PERIOD	0.5 hr

WORK HOURS	11.0 hr
AVAILABLE HOURS	4.0 hr
ACTUAL PROCESS HOURS (total 20-sec records)	2.93 hr
DOWN-TIME	1.07 hr
TOTAL SYSTEM PAUSE	0.25 hr
NONAVAILABLE HOURS	7.0 hr
START-UP	0.28 hr
SHUT-DOWN	0.55 hr
PLANT PERFORMANCE	73.2%
PRODUCTIVITY	26.6%

TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 557

NONPROCESS RECORDS (Test, calibration, etc) 3

20-SEC PROCESS RECORDS

TOTAL SORT	527	1 MD>0 & MND=0
NO SORT	505	AD=0 & MD=0 & MND>0
SOME SORT	21	AD>0&0<MD<MNDmax&MND<MNDmax
UNEXPLAINED RECORDS	0	
0<AD<1kBq & MD>0	0	UNEXPLAIN PAUSE
AD=0 & MD	0	TIME TIME
AD<0 & MD	0	None 13:24
ACT_P <5 kBq	3	10.0%

JA SOIL CLEANUP PLANT LOG SUMMARY

2-SEC COUNT PERIODS 5,270
 2-SEC RECORDS WITH SORTS 30 (ACT_P >0 kBq)
 2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR
 2 DETECTORS 3 50.0%
 3 DETECTORS 2 33.3%
 4 DETECTORS 1 16.7%
 5 DETECTORS 0 0.0%
 6 DETECTORS 0 0.0%
 7 DETECTORS 0 0.0%
 8 DETECTORS 0 0.0%
 TOTAL 6
 NET 2-SEC RECORDS WITH SORTS 24
 2-SEC PERIODS WITH NO SORTS 5,246
 AVG TIME BETWEEN 2-SEC SORTS 439.2 sec

1-GATE SORTS		16	ACT_ND	NUMBER	SPEC_A	ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)		(kBq)
1	0	0.0%	-14000	0	-240	4000	2	6.7%	4
2	3	18.8%	-12000	0	-206	8000	9	30.0%	8
3	4	25.0%	-10000	0	-172	12000	10	33.3%	12
4	5	31.3%	-8000	0	-137	16000	2	6.7%	16
5	0	0.0%	-6000	2	-103	20000	3	10.0%	20
6	1	6.3%	-4000	13	-69	24000	0	0.0%	24
7	2	12.5%	-2000	30	-34	28000	2	6.7%	28
8	1	6.3%	0	54	0	32000	0	0.0%	32
TOTAL	16		2000	98	34	36000	0	0.0%	36
			4000	120	69	40000	0	0.0%	40
2-GATE SORTS		14	6000	122	103	44000	0	0.0%	44
DETECTR	SORTS	FREQ%	8000	57	137	48000	0	0.0%	48
8			10000	29	172	52000	0	0.0%	52
9	1	7.1%	12000	5	206	56000	0	0.0%	56
10	3	21.4%	14000	0	240	60000	0	0.0%	60
11	7	50.0%	16000	0	274	64000	0	0.0%	64
12	0	0.0%	18000	0	309	68000	2	6.7%	68
13	1	7.1%	20000	0	343	72000	0	0.0%	72
14	1	7.1%	22000	0	377	76000	0	0.0%	76
15	1	7.1%	24000	0	412	80000	0	0.0%	80
TOTAL	14		26000	0	446	84000	0	0.0%	84
			>28000	0	0	>84000	0	0.0%	>84
		TOTAL		530		TOTAL	30		

SUMMARY TOTALS

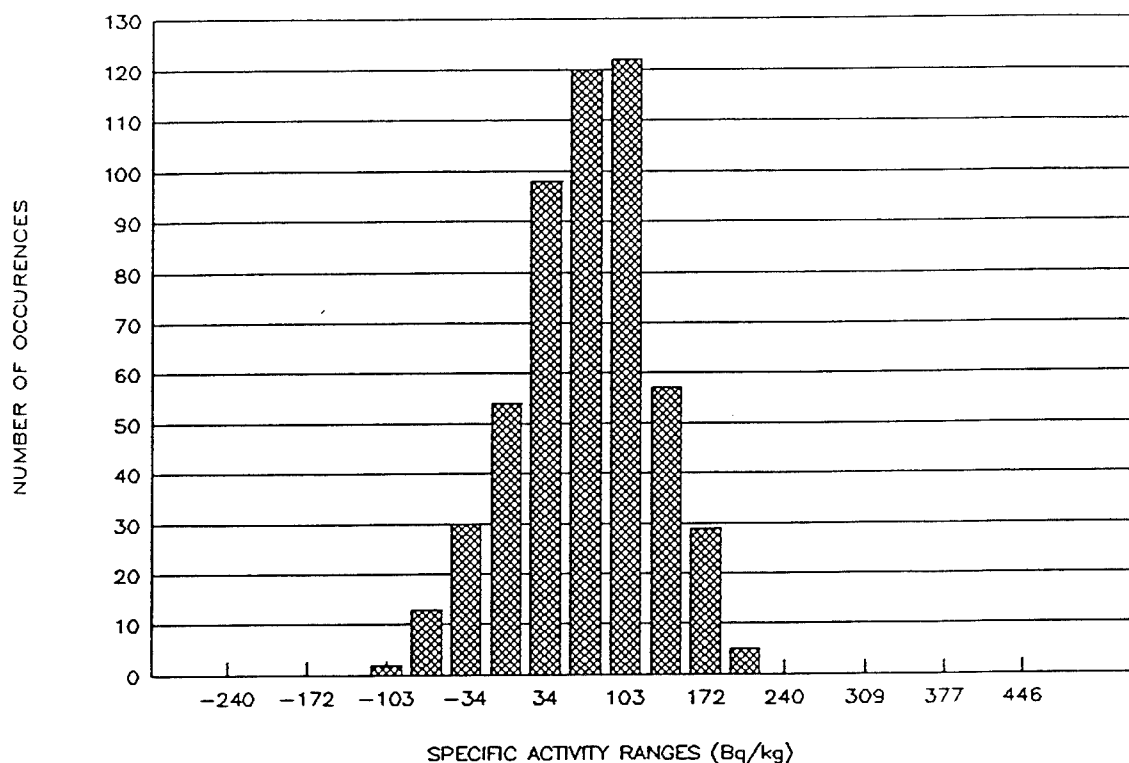
HOT PARTICLE EVENTS	29	SORTS BY ONE GATE ONLY	16
MULTIPARTICLE EVENTS	13	SORTS BY TWO GATES	14
DISTRIBUTED EVENTS	84		

REC CODE EXPLANATION

- 1.00 Source check (Soil on belt)
- 2.00 Empty belt
- 3.00 Test (No process soil)

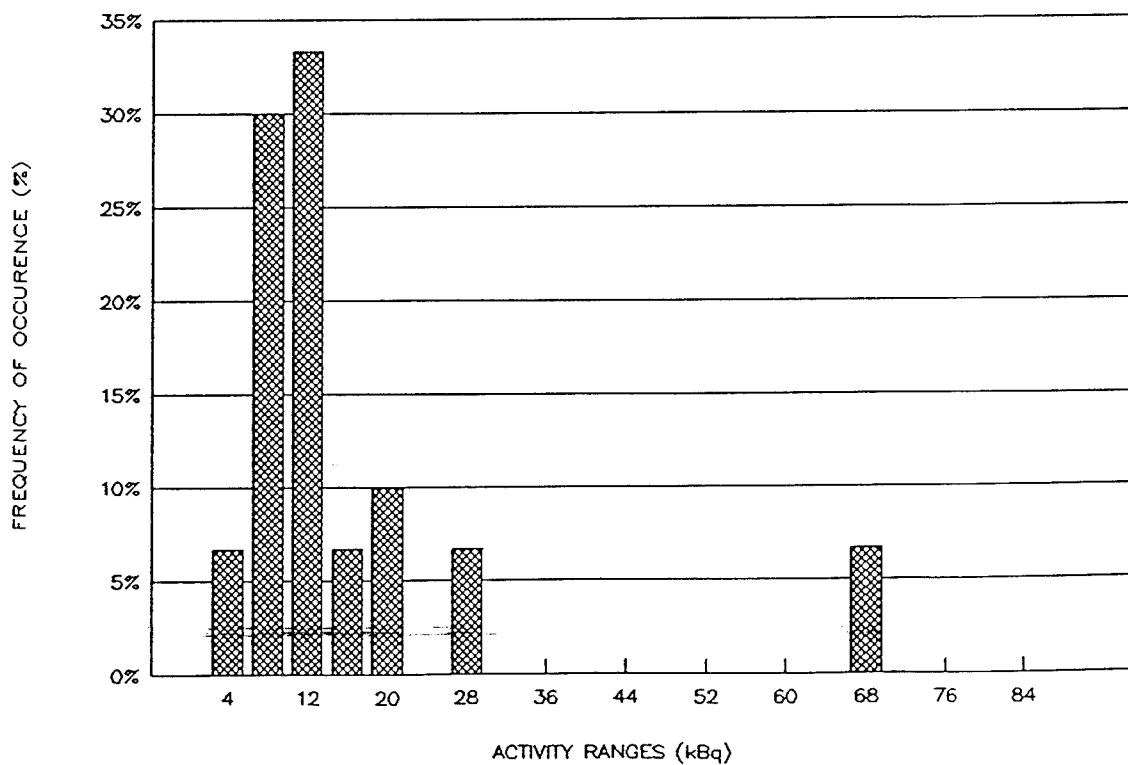
CLEAN SOIL SPECIFIC ACTIVITY

SORTER 2 LOG DATA FOR 06-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 06-Jul-93



JA SOIL CLEANUP PLANT LOG SUMMARY

SORTER 4 06-Jul-93

AVERAGE BACKGROUND COUNT RATE 0.69 ± 0.03 c/sec
 SORTER SOIL DENSITY 1.3 tons/m³
 GROUND SOIL DENSITY 1.65 tons/m³

	CONTAMINATED	CLEAN
MASS TOTAL	0.25 tons	51.3 tons
MAXIMUM/SORT	60.6 kg	60.6 kg
MINIMUM/SORT	0.8 kg	58.3 kg

WEIGHT RECOVERY OR VOLUME RECOVERY		99.5%
EQUIVALENT SOIL-IN-GROUND	0.20 yd ³	40.6 yd ³ 40.8 yd ³ /day

PARTICLE ACTIVITY (MAXIMUM ESTIMATE)

TOTAL	899 kBq
MAXIMUM/SORT	73 kBq
MINIMUM/SORT	3.9 kBq

DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY

	587 kBq	4,906 kBq
MAXIMUM/SORT	58 kBq	20 kBq
MINIMUM/SORT	0 Bq	-3 kBq
SPECIFIC ACTIVITY	2,354 Bq/kg	96 Bq/kg

WORK HISTORY

WORK DAY START	05:00 AM
PLANT START-UP	05:00 AM
START SOIL PROCESSING	05:11 AM
LUNCH START	11:30 AM

WORK DAY END	04:30 PM
PLANT SHUT-DOWN	11:10 AM
END SOIL PROCESSING	10:39 AM
LUNCH PERIOD	0.5 hr

WORK HOURS	11.0 hr
AVAILABLE HOURS	6.2 hr
ACTUAL PROCESS HOURS (total 20-sec records)	4.72 hr
DOWN-TIME	1.44 hr
TOTAL SYSTEM PAUSE	0.68 hr
NONAVAILABLE HOURS	4.8 hr
START-UP	0.20 hr
SHUT-DOWN	0.51 hr
PLANT PERFORMANCE	76.6%
PRODUCTIVITY	42.9%

TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 900

NONPROCESS RECORDS (Test, calibration, etc) 14

20-SEC PROCESS RECORDS

TOTAL SORT	850
NO SORT	2 MD>0 & MND=0
SOME SORT	712 AD=0 & MD=0 & MND>0
UNEXPLAINED RECORDS	136 AD>0&0<MD<MNDmax&MND<MNDmax
	0

0<AD<1kBq & MD>0 0

AD=0 & MD 0

AD<0 & MD 0

ACT_P <5 kBq 5 10.0%

UNEXPLAIN	PAUSE
TIME	TIME
None	05:45
	07:09

JA SOIL CLEANUP PLANT LOG SUMMARY

2-SEC COUNT PERIODS

8,500

2-SEC RECORDS WITH SORTS

50 (ACT_P >0 kBq)

2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR

2 DETECTORS	11	91.7%
3 DETECTORS	1	8.3%
4 DETECTORS	0	0.0%
5 DETECTORS	0	0.0%
6 DETECTORS	0	0.0%
7 DETECTORS	0	0.0%
8 DETECTORS	0	0.0%

TOTAL 12

NET 2-SEC RECORDS WITH SORTS

38

2-SEC PERIODS WITH NO SORTS

8,462

AVG TIME BETWEEN 2-SEC SORTS

447.4 sec

1-GATE SORTS	35	ACT_NO	NUMBER	SPEC_A	ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)	(kBq)
1	17	48.6%	-14000	0	-231	4000	1	2.0%
2	3	8.6%	-12000	0	-198	8000	17	34.0%
3	5	14.3%	-10000	0	-165	12000	12	24.0%
4	2	5.7%	-8000	2	-132	16000	9	18.0%
5	2	5.7%	-6000	4	-99	20000	0	0.0%
6	3	8.6%	-4000	2	-66	24000	1	2.0%
7	2	5.7%	-2000	5	-33	28000	1	2.0%
8	1	2.9%	0	37	0	32000	0	0.0%
TOTAL	35		2000	78	33	36000	1	2.0%
			4000	174	66	40000	0	0.0%
2-GATE SORTS	15	6000	190	99	44000	1	2.0%	44
DETECTR	SORTS	FREQ%	8000	167	132	48000	0	0.0%
8			10000	112	165	52000	0	0.0%
9	2	13.3%	12000	50	198	56000	1	2.0%
10	1	6.7%	14000	22	231	60000	2	4.0%
11	5	33.3%	16000	7	264	64000	3	6.0%
12	2	13.3%	18000	7	297	68000	0	0.0%
13	2	13.3%	20000	5	330	72000	0	0.0%
14	2	13.3%	22000	2	363	76000	1	2.0%
15	1	6.7%	24000	0	396	80000	0	0.0%
TOTAL	15		26000	0	429	84000	0	0.0%
			>28000	0	0	>84000	0	0.0%
			TOTAL	864		TOTAL	50	

SUMMARY TOTALS

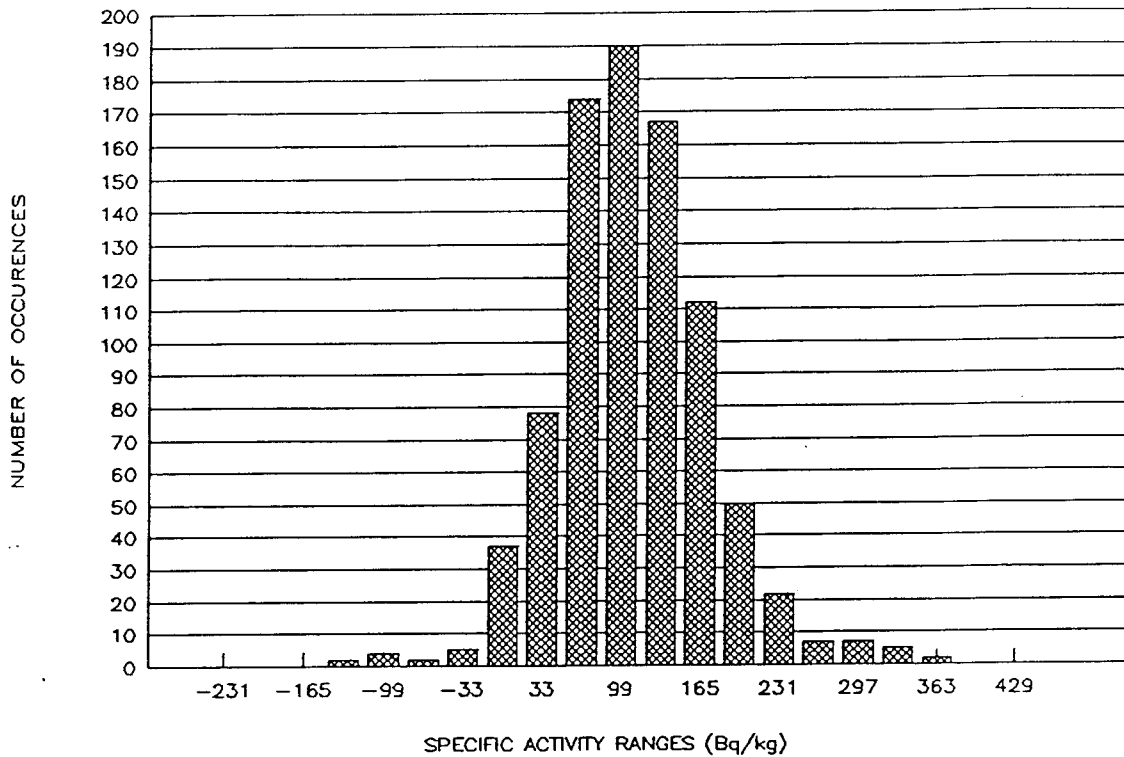
HOT PARTICLE EVENTS	48	SORTS BY ONE GATE ONLY	35
MULTIPARTICLE EVENTS	117	SORTS BY TWO GATES	15
DISTRIBUTED EVENTS	158		

REC CODE EXPLANATION

1.00 Source check (Soil on belt)
 2.00 Empty belt
 3.00 Test (No process soil)

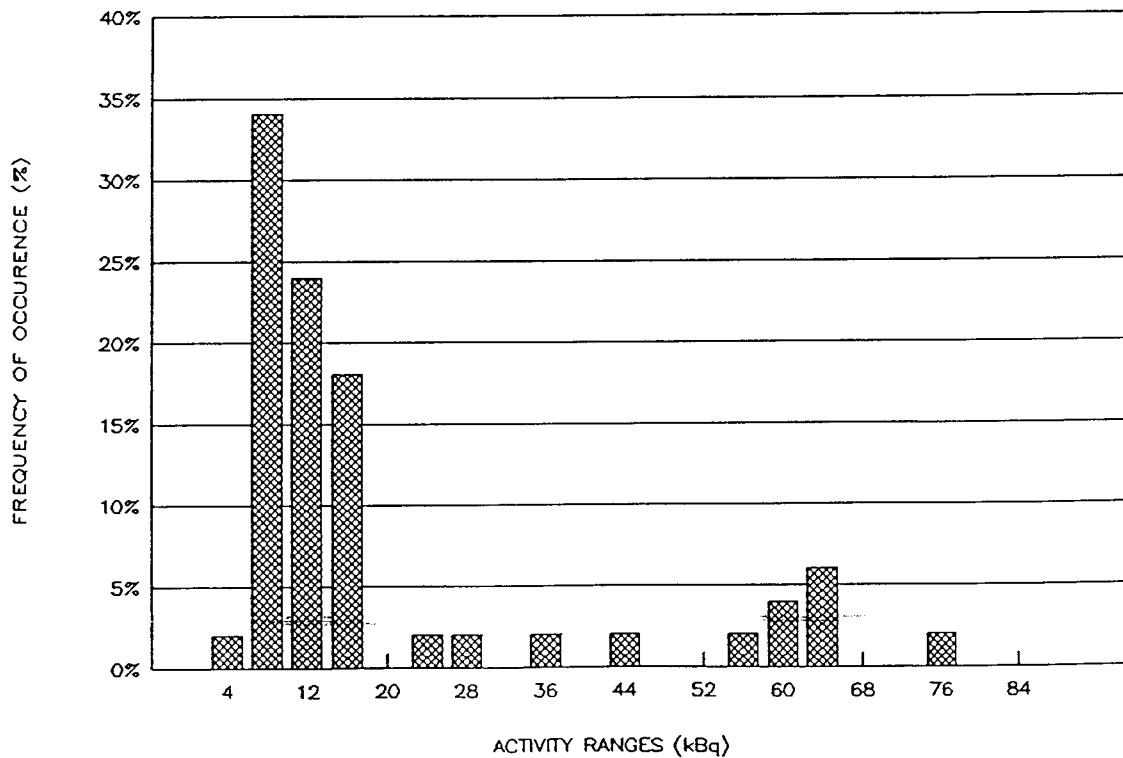
CLEAN SOIL SPECIFIC ACTIVITY

SORTER 4 LOG DATA FOR 06-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 4 LOG DATA FOR 06-Jul-93



JA SOIL CLEANUP PLANT LOG SUMMARY

SORTER 1 12-Jul-93

AVERAGE BACKGROUND COUNT RATE 0.77 ± 0.04 c/sec
 SORTER SOIL DENSITY 1.3 tons/m³
 GROUND SOIL DENSITY 1.65 tons/m³

	CONTAMINATED	CLEAN
MASS TOTAL	2.62 tons	107.9 tons
MAXIMUM/SORT	58.2 kg	58.2 kg
MINIMUM/SORT	0.7 kg	50.2 kg

WEIGHT RECOVERY OR VOLUME RECOVERY		97.6%
EQUIVALENT SOIL-IN-GROUND	2.08 yd ³	85.5 yd ³ 87.6 yd ³ /day

PARTICLE ACTIVITY (MAXIMUM ESTIMATE)

TOTAL	19,158 kBq
MAXIMUM/SORT	285 kBq
MINIMUM/SORT	2.9 kBq

DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY	7,607 kBq	10,785 kBq
MAXIMUM/SORT	184 kBq	21 kBq
MINIMUM/SORT	0 Bq	-4 kBq
SPECIFIC ACTIVITY	2,901 Bq/kg	100 Bq/kg

WORK HISTORY

WORK DAY START	05:00 AM	WORK DAY END	04:30 PM
PLANT START-UP	05:00 AM	PLANT SHUT-DOWN	04:30 PM
START SOIL PROCESSING	05:22 AM	END SOIL PROCESSING	03:55 PM
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 hr

WORK HOURS	11.5 hr
AVAILABLE HOURS	11.5 hr
ACTUAL PROCESS HOURS (total 20-sec records)	10.54 hr
DOWN-TIME	0.96 hr
TOTAL SYSTEM PAUSE	0.03 hr
NONAVAILABLE HOURS	0.0 hr
START-UP	0.37 hr
SHUT-DOWN	0.57 hr
PLANT PERFORMANCE	91.7%
PRODUCTIVITY	91.7%

TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 3,047

NONPROCESS RECORDS (Test, calibration, etc) 10

20-SEC PROCESS RECORDS	1,898
TOTAL SORT	26 MD>0 & MND=0
NO SORT	1,244 AD=0 & MD=0 & MND>0
SOME SORT	628 AD>0&0<MD<MNDmax&MND<MNDmax
UNEXPLAINED RECORDS	0

0<AD<1kBq & MD>0	5	UNEXPLAIN	PAUSE
AD=0 & MD	0	TIME	TIME
AD<0 & MD	0	06:02:29	05:38
ACT_P <5 kBq	256 22.3%	09:47:09	

JA SOIL CLEANUP PLANT LOG SUMMARY

2-SEC COUNT PERIODS	18,980	11:57:29
2-SEC RECORDS WITH SORTS	1,149 (ACT_P > 0 kBq)	13:05:49
2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR		13:08:09
2 DETECTORS	258 80.6%	
3 DETECTORS	54 16.9%	
4 DETECTORS	8 2.5%	
5 DETECTORS	0 0.0%	
6 DETECTORS	0 0.0%	
7 DETECTORS	0 0.0%	
8 DETECTORS	0 0.0%	
TOTAL	320	
NET 2-SEC RECORDS WITH SORTS	829	
2-SEC PERIODS WITH NO SORTS	18,151	
AVG TIME BETWEEN 2-SEC SORTS	45.8 sec	

1-GATE SORTS	564	ACT_ND	NUMBER	SPEC_A	ACT_P	SORT FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)
1	11	2.0%	-14000	0	-241	4000	76 6.6%
2	38	6.7%	-12000	0	-206	8000	514 44.7%
3	80	14.2%	-10000	0	-172	12000	197 17.1%
4	101	17.9%	-8000	0	-137	16000	93 8.1%
5	150	26.6%	-6000	2	-103	20000	50 4.4%
6	94	16.7%	-4000	5	-69	24000	27 2.3%
7	77	13.7%	-2000	15	-34	28000	34 3.0%
8	13	2.3%	0	90	0	32000	21 1.8%
TOTAL	564		2000	169	34	36000	21 1.8%
			4000	367	69	40000	11 1.0%
2-GATE SORTS	585		6000	445	103	44000	12 1.0%
DETECTR	SORTS	FREQ%	8000	383	137	48000	9 0.8%
8			10000	217	172	52000	7 0.6%
9	24	4.1%	12000	111	206	56000	5 0.4%
10	50	8.5%	14000	60	241	60000	6 0.5%
11	107	18.3%	16000	22	275	64000	6 0.5%
12	143	24.4%	18000	8	309	68000	4 0.3%
13	126	21.5%	20000	9	344	72000	4 0.3%
14	92	15.7%	22000	5	378	76000	6 0.5%
15	43	7.4%	24000	0	412	80000	8 0.7%
TOTAL	585		26000	0	447	84000	2 0.2%
			>28000	0	0	>84000	36 3.1%
			TOTAL	1908		TOTAL	1149

SUMMARY TOTALS

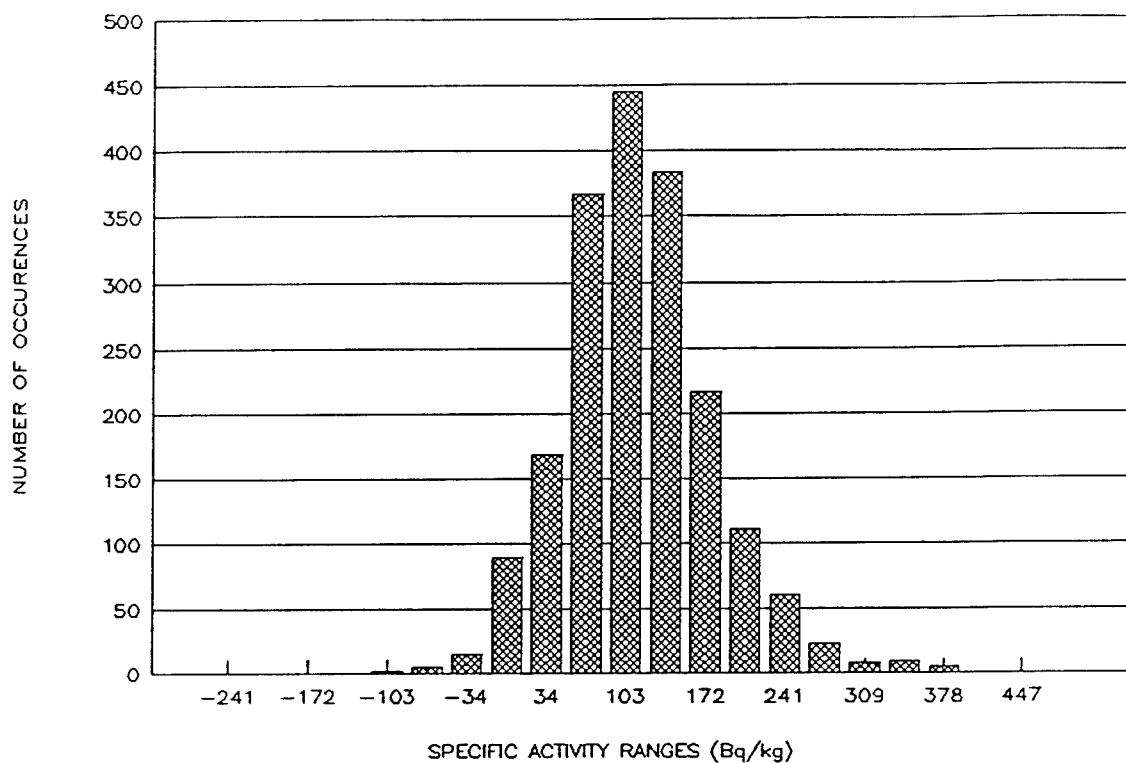
HOT PARTICLE EVENTS	1162	SORTS BY ONE GATE ONLY	564
MULTIPARTICLE EVENTS	483	SORTS BY TWO GATES	585
DISTRIBUTED EVENTS	1954		

REC CODE EXPLANATION

1.00 Source check (Soil on belt)
 2.00 Empty belt
 3.00 Test (No process soil)

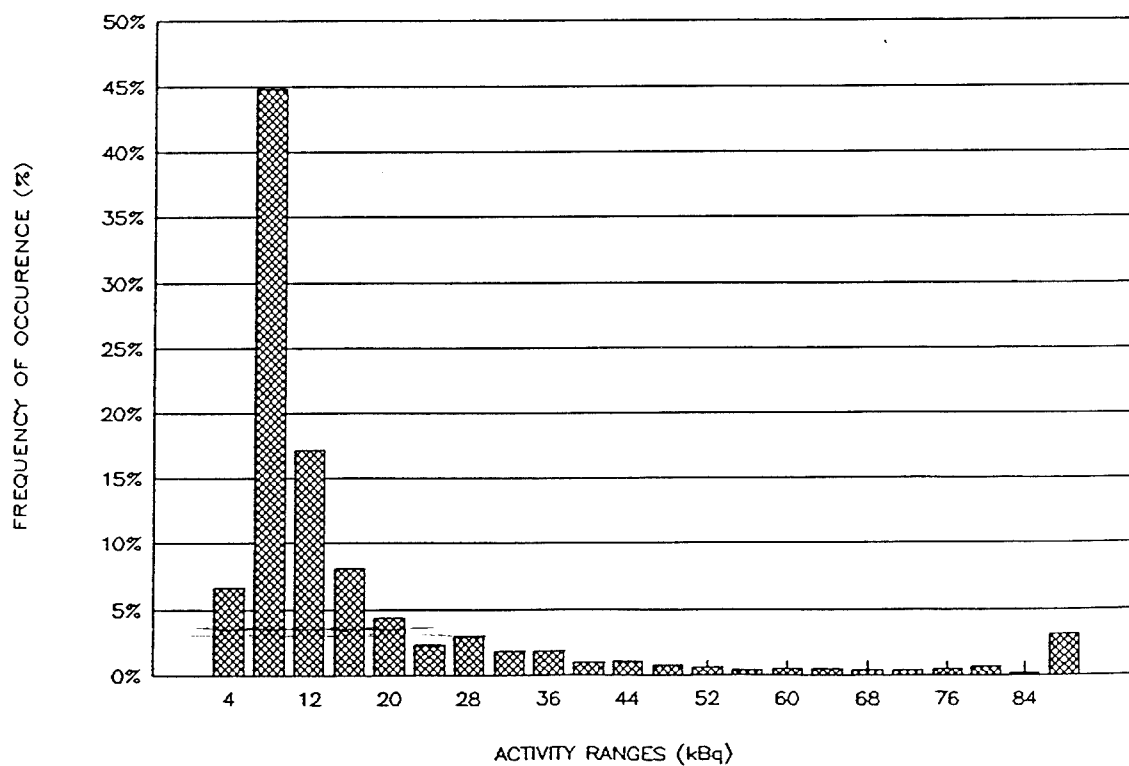
CLEAN SOIL SPECIFIC ACTIVITY

SORTER 1 LOG DATA FOR 12-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 12-Jul-93



JA SOIL CLEANUP PLANT LOG SUMMARY

SORTER 2 12-Jul-93

AVERAGE BACKGROUND COUNT RATE 0.80 ± 0.02 c/sec
 SORTER SOIL DENSITY 1.3 tons/m³
 GROUND SOIL DENSITY 1.65 tons/m³

	CONTAMINATED	CLEAN
MASS TOTAL	3.73 tons	107.1 tons
MAXIMUM/SORT	58.3 kg	58.3 kg
MINIMUM/SORT	0.7 kg	49.5 kg

WEIGHT RECOVERY OR VOLUME RECOVERY			96.6%
EQUIVALENT SOIL-IN-GROUND	2.96 yd ³	84.9 yd ³	87.9 yd ³ /day

PARTICLE ACTIVITY (MAXIMUM ESTIMATE)

TOTAL	24,289 kBq
MAXIMUM/SORT	1,592 kBq
MINIMUM/SORT	2.8 kBq

DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY	9,965 kBq	13,338 kBq
MAXIMUM/SORT	897 kBq	21 kBq
MINIMUM/SORT	0 Bq	-5 kBq
SPECIFIC ACTIVITY	2,670 Bq/kg	125 Bq/kg

WORK HISTORY

WORK DAY START	05:00 AM	WORK DAY END	04:30 PM
PLANT START-UP	05:00 AM	PLANT SHUT-DOWN	04:30 PM
START SOIL PROCESSING	05:20 AM	END SOIL PROCESSING	03:55 PM
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 hr

WORK HOURS	11.5 hr
AVAILABLE HOURS	11.5 hr
ACTUAL PROCESS HOURS (total 20-sec records)	10.57 hr
DOWN-TIME	0.93 hr
TOTAL SYSTEM PAUSE	0.03 hr
NONAVAILABLE HOURS	0.0 hr
START-UP	0.35 hr
SHUT-DOWN	0.57 hr
PLANT PERFORMANCE	91.9%
PRODUCTIVITY	91.9%

TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 3,200

NONPROCESS RECORDS (Test, calibration, etc) 6

20-SEC PROCESS RECORDS

TOTAL SORT	1,902
42 MD>0 & MND=0	
NO SORT	1,153 AD=0 & MD=0 & MND>0
SOME SORT	707 AD>0&0<MD<MNDmax&MND<MNDmax
UNEXPLAINED RECORDS	0

0<AD<1kBq & MD>0	3	UNEXPLAIN	PAUSE
AD=0 & MD	0	TIME	TIME
AD<0 & MD	0	07:59:49	05:38
ACT_P <5 kBq	196 15.1%	11:23:29	

JA SOIL CLEANUP PLANT LOG SUMMARY

2-SEC COUNT PERIODS

19,020

14:52:09

2-SEC RECORDS WITH SORTS

1,298 (ACT_P >0 kBq)

2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR

2 DETECTORS	283	84.2%
3 DETECTORS	50	14.9%
4 DETECTORS	3	0.9%
5 DETECTORS	0	0.0%
6 DETECTORS	0	0.0%
7 DETECTORS	0	0.0%
8 DETECTORS	0	0.0%

TOTAL 336

NET 2-SEC RECORDS WITH SORTS

962

2-SEC PERIODS WITH NO SORTS

18,058

AVG TIME BETWEEN 2-SEC SORTS

39.5 sec

1-GATE SORTS	680	ACT_NO	NUMBER	SPEC_A	ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)	(kBq)
1	23	3.4%	-14000	0	-240	4000	54	4.2%
2	104	15.3%	-12000	0	-206	8000	581	44.8%
3	127	18.7%	-10000	0	-172	12000	251	19.3%
4	137	20.1%	-8000	0	-137	16000	108	8.3%
5	128	18.8%	-6000	1	-103	20000	57	4.4%
6	91	13.4%	-4000	6	-69	24000	55	4.2%
7	63	9.3%	-2000	13	-34	28000	20	1.5%
8	7	1.0%	0	79	0	32000	33	2.5%
TOTAL	680		2000	144	34	36000	20	1.5%
			4000	263	69	40000	15	1.2%
2-GATE SORTS	618	6000	322	103	44000	10	0.8%	44
DETECTR	SORTS	FREQ%	8000	345	137	48000	9	0.7%
8			10000	283	172	52000	8	0.6%
9	55	8.9%	12000	197	206	56000	10	0.8%
10	90	14.6%	14000	115	240	60000	6	0.5%
11	134	21.7%	16000	79	274	64000	9	0.7%
12	129	20.9%	18000	34	309	68000	5	0.4%
13	111	18.0%	20000	22	343	72000	4	0.3%
14	66	10.7%	22000	5	377	76000	4	0.3%
15	33	5.3%	24000	0	412	80000	8	0.6%
TOTAL	618		26000	0	446	84000	1	0.1%
			>28000	0	0	>84000	30	2.3%
			TOTAL	1908		TOTAL	1298	

SUMMARY TOTALS

HOT PARTICLE EVENTS	1261
MULTIPARTICLE EVENTS	742
DISTRIBUTED EVENTS	3118

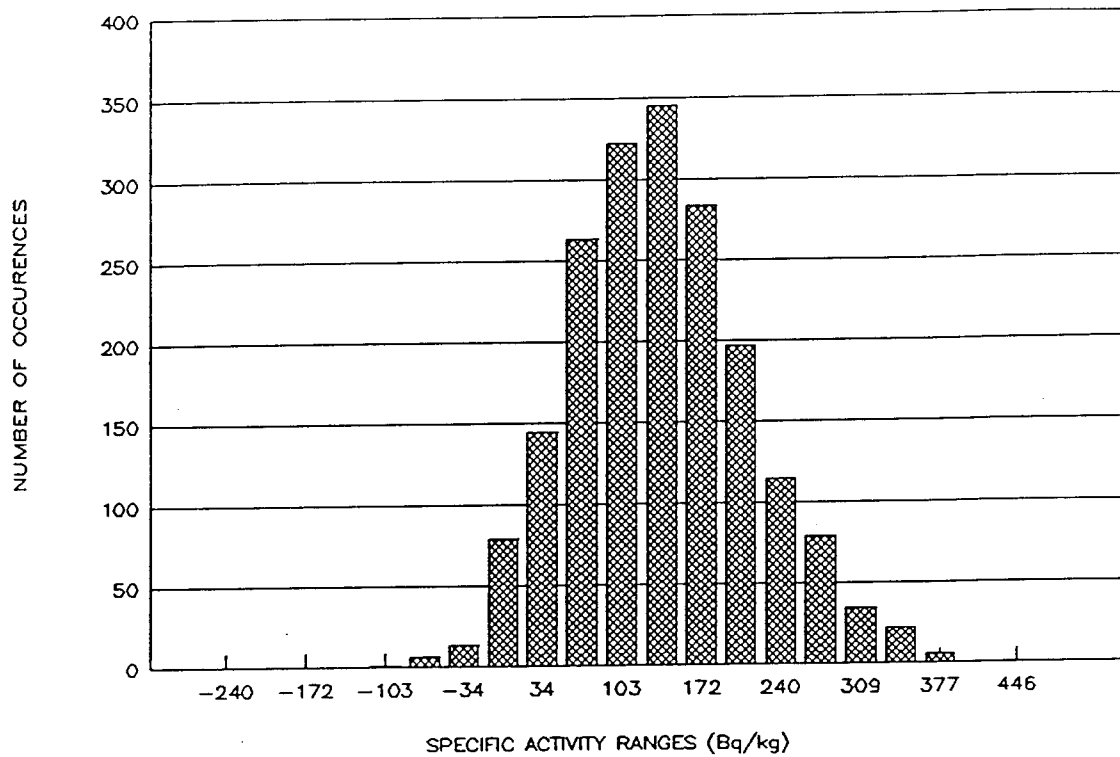
SORTS BY ONE GATE ONLY	680
SORTS BY TWO GATES	618

REC CODE EXPLANATION

1.00 Source check (Soil on belt)
 2.00 Empty belt
 3.00 Test (No process soil)

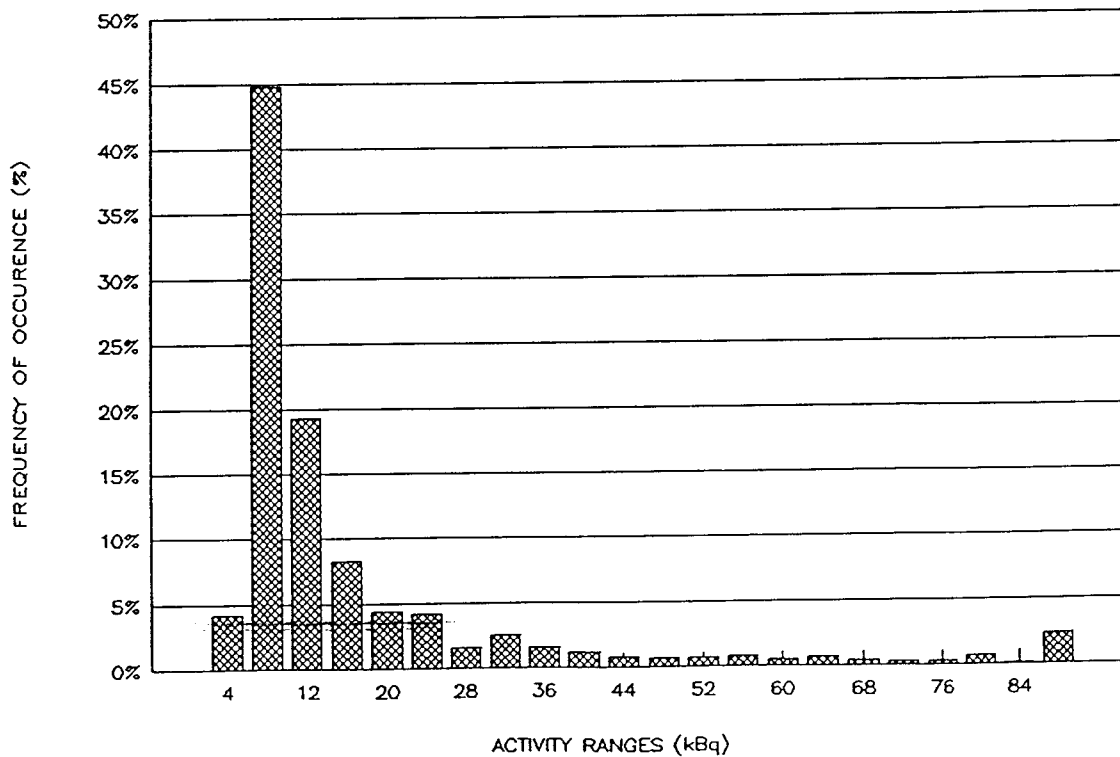
CLEAN SOIL SPECIFIC ACTIVITY

SORTER 2 LOG DATA FOR 12-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES.

SORTER 2 LOG DATA FOR 12-Jul-93



JA SOIL CLEANUP PLANT LOG SUMMARY

SORTER 1 13-Jul-93

AVERAGE BACKGROUND COUNT RATE 0.78 \pm 0.04 c/sec
 SORTER SOIL DENSITY 1.3 tons/m³
 GROUND SOIL DENSITY 1.65 tons/m³

	CONTAMINATED	CLEAN
MASS TOTAL	0.37 tons	107.0 tons
MAXIMUM/SORT	5.8 kg	58.2 kg
MINIMUM/SORT	0.7 kg	52.4 kg

		99.7%
WEIGHT RECOVERY OR VOLUME RECOVERY		
EQUIVALENT SOIL-IN-GROUND	0.29 yd ³	84.8 yd ³ 85.1 yd ³ /day

PARTICLE ACTIVITY (MAXIMUM ESTIMATE)

TOTAL	7,157 kBq
MAXIMUM/SORT	335 kBq
MINIMUM/SORT	2.9 kBq

DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY

	2,440 kBq	6,776 kBq
MAXIMUM/SORT	161 kBq	16 kBq
MINIMUM/SORT	0 Bq	-5 kBq
SPECIFIC ACTIVITY	6,580 Bq/kg	63 Bq/kg

WORK HISTORY

WORK DAY START	05:00 AM	WORK DAY END	04:30 PM
PLANT START-UP	05:00 AM	PLANT SHUT-DOWN	04:30 PM
START SOIL PROCESSING	05:35 AM	END SOIL PROCESSING	03:50 PM
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 hr

WORK HOURS	11.5 hr
AVAILABLE HOURS	11.5 hr
ACTUAL PROCESS HOURS (total 20-sec records)	10.25 hr
DOWN-TIME	1.25 hr
TOTAL SYSTEM PAUSE	0.00 hr
NONAVAILABLE HOURS	0.0 hr
START-UP	0.59 hr
SHUT-DOWN	0.66 hr
PLANT PERFORMANCE	89.1%
PRODUCTIVITY	89.1%

TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 2,189

NONPROCESS RECORDS (Test, calibration, etc) 11

20-SEC PROCESS RECORDS

TOTAL SORT	1,845	0 MD>0 & MND=0
NO SORT	1,583	AD=0 & MD=0 & MND>0
SOME SORT	262	AD>0&0<MD<MNDmax&MND<MNDmax
UNEXPLAINED RECORDS	0	
0<AD<1kBq & MD>0	0	UNEXPLAIN PAUSE
AD=0 & MD	0	TIME TIME
AD<0 & MD	0	None None
ACT_P <5 kBq	59	17.2%

JA SOIL CLEANUP PLANT LOG SUMMARY

2-SEC COUNT PERIODS 18,450
 2-SEC RECORDS WITH SORTS 344 (ACT_P >0 kBq)
 2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR
 2 DETECTORS 82 81.2%
 3 DETECTORS 15 14.9%
 4 DETECTORS 4 4.0%
 5 DETECTORS 0 0.0%
 6 DETECTORS 0 0.0%
 7 DETECTORS 0 0.0%
 8 DETECTORS 0 0.0%
 TOTAL 101
 NET 2-SEC RECORDS WITH SORTS 243
 2-SEC PERIODS WITH NO SORTS 18,207
 AVG TIME BETWEEN 2-SEC SORTS 151.9 sec

1-GATE SORTS		170	ACT_ND	NUMBER	SPEC_A	ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)		(kBq)
1	1	0.6%	-14000	0	-241	4000	13	3.8%	4
2	4	2.4%	-12000	0	-206	8000	142	41.3%	8
3	26	15.3%	-10000	3	-172	12000	53	15.4%	12
4	26	15.3%	-8000	3	-137	16000	33	9.6%	16
5	46	27.1%	-6000	2	-103	20000	16	4.7%	20
6	34	20.0%	-4000	7	-69	24000	13	3.8%	24
7	25	14.7%	-2000	30	-34	28000	15	4.4%	28
8	8	4.7%	0	146	0	32000	4	1.2%	32
TOTAL	170		2000	336	34	36000	9	2.6%	36
			4000	510	69	40000	6	1.7%	40
2-GATE SORTS		174	6000	452	103	44000	3	0.9%	44
DETECTR	SORTS	FREQ%	8000	243	137	48000	4	1.2%	48
8			10000	82	172	52000	2	0.6%	52
9	2	1.1%	12000	29	206	56000	3	0.9%	56
10	17	9.8%	14000	11	241	60000	2	0.6%	60
11	25	14.4%	16000	1	275	64000	5	1.5%	64
12	46	26.4%	18000	1	309	68000	3	0.9%	68
13	42	24.1%	20000	0	344	72000	3	0.9%	72
14	26	14.9%	22000	0	378	76000	1	0.3%	76
15	16	9.2%	24000	0	412	80000	0	0.0%	80
TOTAL	174		26000	0	447	84000	0	0.0%	84
			>28000	0	0	>84000	14	4.1%	>84
			TOTAL	1856		TOTAL	344		

SUMMARY TOTALS

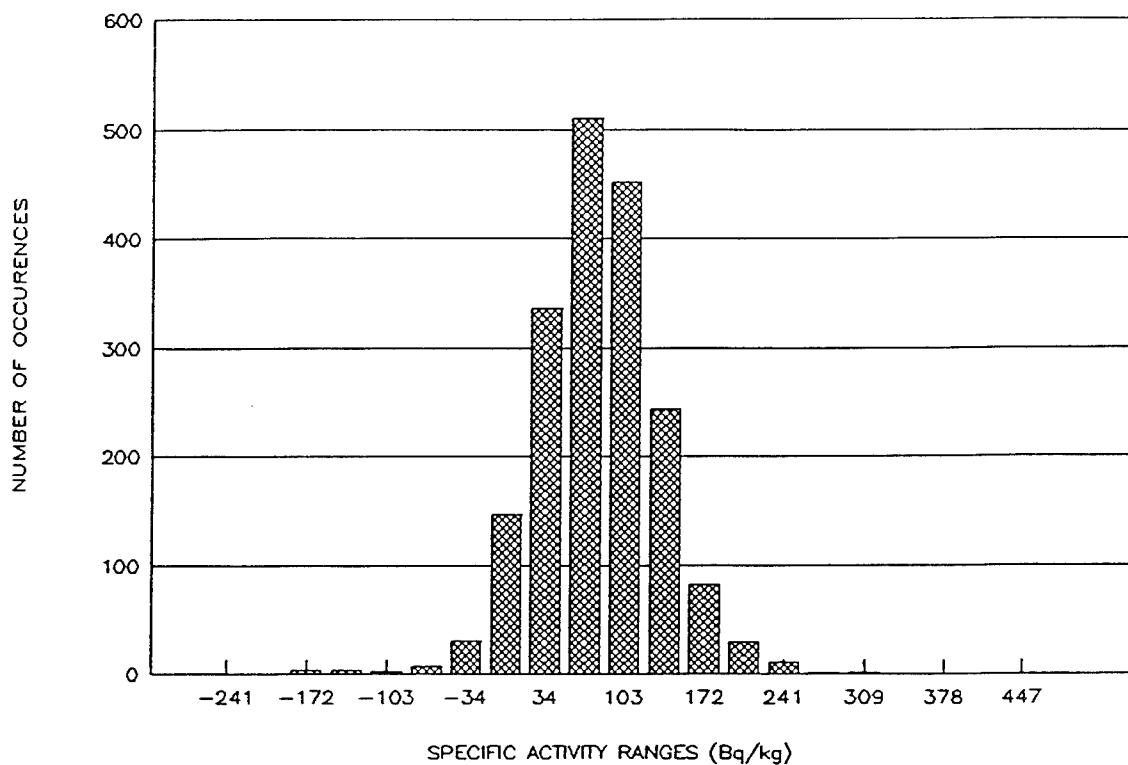
HOT PARTICLE EVENTS	340	SORTS BY ONE GATE ONLY	170
MULTIPARTICLE EVENTS	169	SORTS BY TWO GATES	174
DISTRIBUTED EVENTS	0		

REC CODE EXPLANATION

1.00 Source check (Soil on belt)
 2.00 Empty belt
 3.00 Test (No process soil)

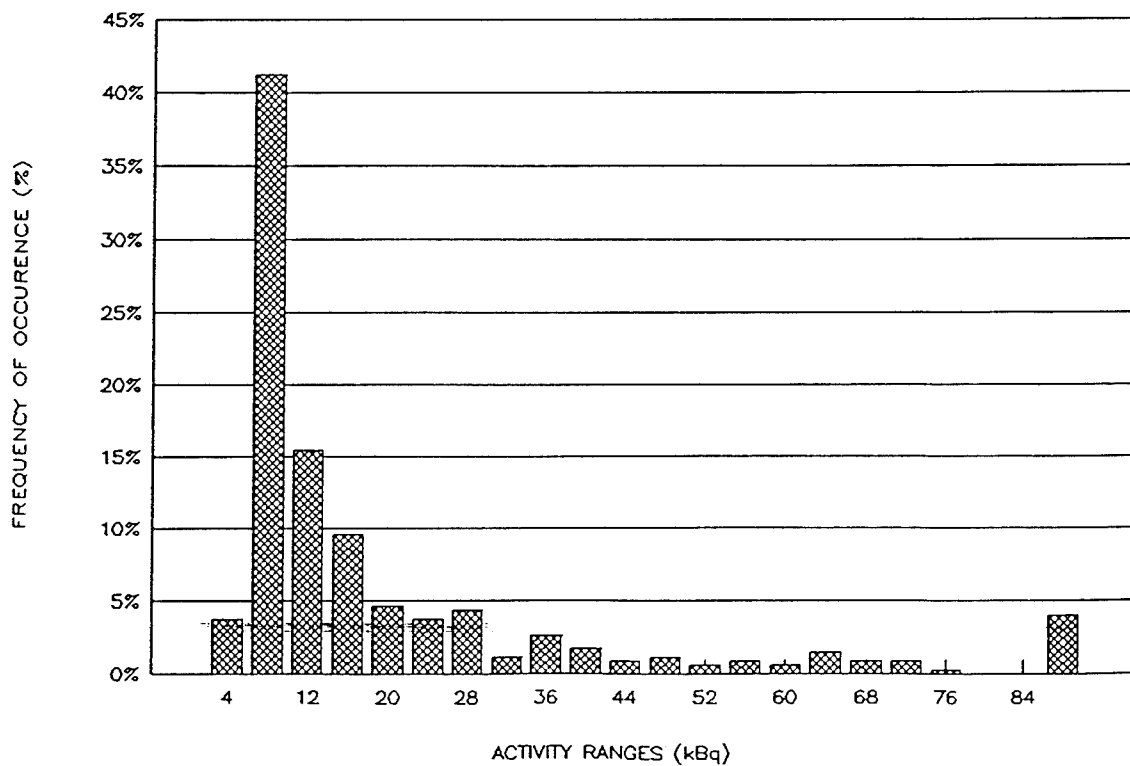
CLEAN SOIL SPECIFIC ACTIVITY

SORTER 1 LOG DATA FOR 13-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 13-Jul-93



JA SOIL CLEANUP PLANT LOG SUMMARY

SORTER 2 13-Jul-93

AVERAGE BACKGROUND COUNT RATE	0.80 ± 0.02 c/sec		
SORTER SOIL DENSITY	1.3 tons/m ³		
GROUND SOIL DENSITY	1.65 tons/m ³		
	CONTAMINATED	CLEAN	
MASS TOTAL	0.41 tons	107.6 tons	
MAXIMUM/SORT	4.4 kg	58.3 kg	
MINIMUM/SORT	0.7 kg	53.9 kg	
WEIGHT RECOVERY OR VOLUME RECOVERY			99.6%
EQUIVALENT SOIL-IN-GROUND	0.33 yd ³	85.3 yd ³	85.6 yd ³ /day
PARTICLE ACTIVITY (MAXIMUM ESTIMATE)			
TOTAL	7,526 kBq		
MAXIMUM/SORT	307 kBq		
MINIMUM/SORT	3.4 kBq		
DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY	2,659 kBq	10,370 kBq	
MAXIMUM/SORT	159 kBq	20 kBq	
MINIMUM/SORT	0 Bq	-7 kBq	
SPECIFIC ACTIVITY	6,433 Bq/kg	96 Bq/kg	
WORK HISTORY			
WORK DAY START	05:00 AM	WORK DAY END	04:30 PM
PLANT START-UP	05:00 AM	PLANT SHUT-DOWN	04:30 PM
START SOIL PROCESSING	05:34 AM	END SOIL PROCESSING	03:51 PM
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 hr
WORK HOURS	11.5 hr		
AVAILABLE HOURS	11.5 hr		
ACTUAL PROCESS HOURS (total 20-sec records)	10.29 hr		
DOWN-TIME	1.21 hr		
TOTAL SYSTEM PAUSE	0.00 hr		
NONAVAILABLE HOURS	0.0 hr		
START-UP	0.57 hr		
SHUT-DOWN	0.64 hr		
PLANT PERFORMANCE	89.5%		
PRODUCTIVITY	89.5%		
TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)	2,239		
NONPROCESS RECORDS (Test, calibration, etc)	3		
20-SEC PROCESS RECORDS	1,853		
TOTAL SORT	0 MD>0 & MND=0		
NO SORT	1,556 AD=0 & MD=0 & MND>0		
SOME SORT	297 AD>0&0<MD<MNDmax&MND<MNDmax		
UNEXPLAINED RECORDS	0		
0<AD<1kBq & MD>0	1	UNEXPLAIN	PAUSE
AD=0 & MD	0	TIME	TIME
AD<0 & MD	0	09:17:23	None
ACT_P <5 kBq	44 11.4%		

JA SOIL CLEANUP PLANT LOG SUMMARY

2-SEC COUNT PERIODS 18,530
 2-SEC RECORDS WITH SORTS 386 (ACT_P >0 kBq)
 2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR
 2 DETECTORS 86 80.4%
 3 DETECTORS 18 16.8%
 4 DETECTORS 3 2.8%
 5 DETECTORS 0 0.0%
 6 DETECTORS 0 0.0%
 7 DETECTORS 0 0.0%
 8 DETECTORS 0 0.0%
 TOTAL 107
 NET 2-SEC RECORDS WITH SORTS 279
 2-SEC PERIODS WITH NO SORTS 18,251
 AVG TIME BETWEEN 2-SEC SORTS 132.8 sec

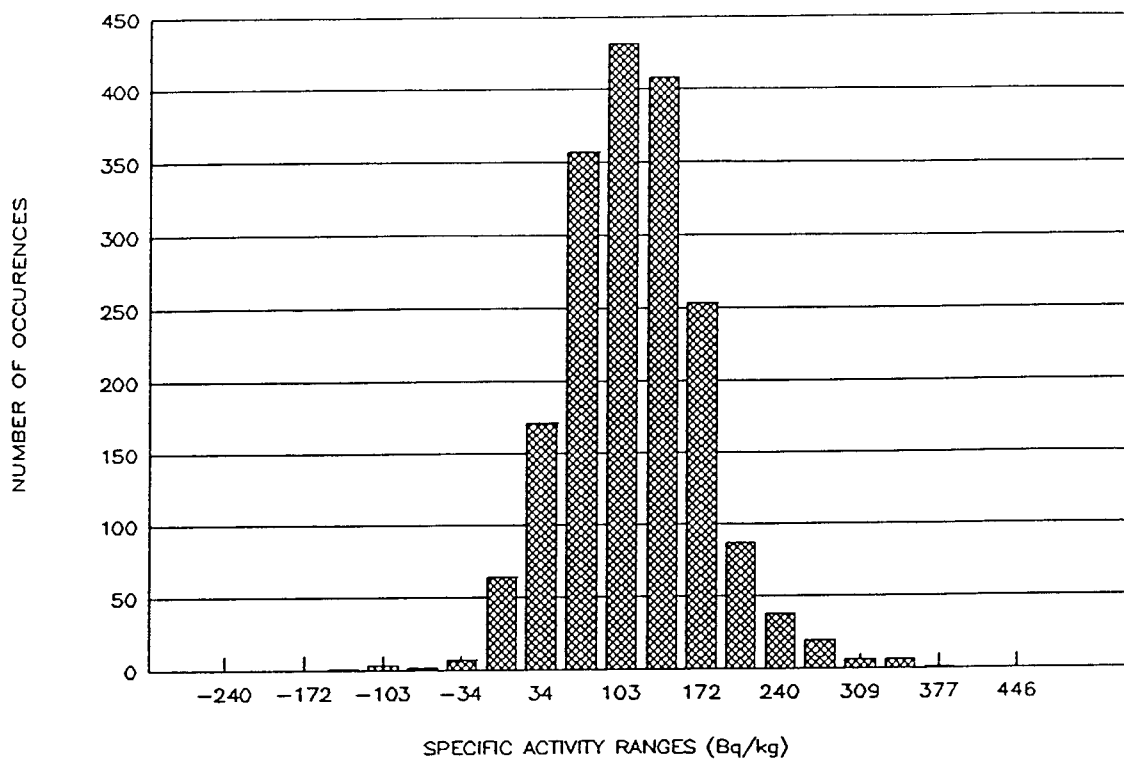
1-GATE SORTS	199	ACT_NO	NUMBER	SPEC_A	ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#) (Bq/kg)	(Bq)	(#)		(kBq)
1	8	4.0%	-14000	0	-240	4000	12	3.1%
2	37	18.6%	-12000	0	-206	8000	148	38.3%
3	29	14.6%	-10000	0	-172	12000	69	17.9%
4	34	17.1%	-8000	1	-137	16000	43	11.1%
5	38	19.1%	-6000	3	-103	20000	27	7.0%
6	33	16.6%	-4000	2	-69	24000	6	1.6%
7	19	9.5%	-2000	7	-34	28000	12	3.1%
8	1	0.5%	0	64	0	32000	6	1.6%
TOTAL	199		2000	171	34	36000	11	2.8%
			4000	357	69	40000	6	1.6%
2-GATE SORTS	187		6000	432	103	44000	4	1.0%
DETECTR	SORTS	FREQ%	8000	408	137	48000	4	1.0%
8			10000	254	172	52000	1	0.3%
9	20	10.7%	12000	87	206	56000	3	0.8%
10	28	15.0%	14000	38	240	60000	3	0.8%
11	32	17.1%	16000	19	274	64000	7	1.8%
12	37	19.8%	18000	6	309	68000	3	0.8%
13	31	16.6%	20000	6	343	72000	6	1.6%
14	30	16.0%	22000	1	377	76000	0	0.0%
15	9	4.8%	24000	0	412	80000	5	1.3%
TOTAL	187		26000	0	446	84000	0	0.0%
			>28000	0	0	>84000	10	2.6%
			TOTAL	1856		TOTAL	386	
SUMMARY TOTALS								
HOT PARTICLE EVENTS			373	SORTS BY ONE GATE ONLY		199		
MULTIPARTICLE EVENTS			193	SORTS BY TWO GATES		187		
DISTRIBUTED EVENTS			0					

REC CODE EXPLANATION

1.00 Source check (Soil on belt)
 2.00 Empty belt
 3.00 Test (No process soil)

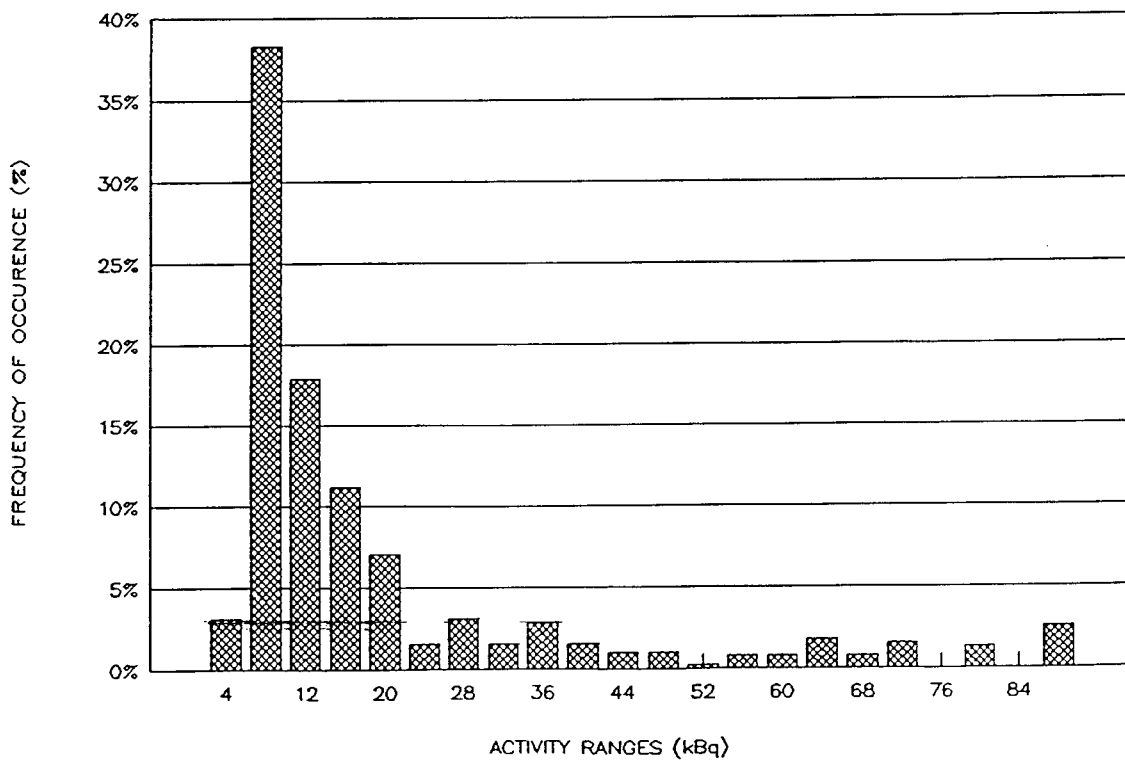
CLEAN SOIL SPECIFIC ACTIVITY

SORTER 2 LOG DATA FOR 13-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 13-Jul-93



JA SOIL CLEANUP PLANT LOG SUMMARY

SORTER 1 14-Jul-93

AVERAGE BACKGROUND COUNT RATE 0.75 ± 0.05 c/sec
 SORTER SOIL DENSITY 1.3 tons/m³
 GROUND SOIL DENSITY 1.65 tons/m³

	CONTAMINATED	CLEAN
MASS TOTAL	0.35 tons	106.6 tons
MAXIMUM/SORT	5.1 kg	58.2 kg
MINIMUM/SORT	0.7 kg	53.1 kg

WEIGHT RECOVERY OR VOLUME RECOVERY		99.7%
EQUIVALENT SOIL-IN-GROUND	0.27 yd ³	84.5 yd ³ 84.8 yd ³ /day

PARTICLE ACTIVITY (MAXIMUM ESTIMATE)

TOTAL	6,514 kBq
MAXIMUM/SORT	541 kBq
MINIMUM/SORT	3.0 kBq

DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY	2,226 kBq	7,917 kBq
MAXIMUM/SORT	308 kBq	18 kBq
MINIMUM/SORT	0 Bq	-12 kBq
SPECIFIC ACTIVITY	6,430 Bq/kg	74 Bq/kg

WORK HISTORY

WORK DAY START 05:00 AM
 PLANT START-UP 05:00 AM
 START SOIL PROCESSING 05:27 AM
 LUNCH START 11:30 AM

WORK DAY END 04:30 PM
 PLANT SHUT-DOWN 04:30 PM
 END SOIL PROCESSING 03:40 PM
 LUNCH PERIOD 0.0 hr

WORK HOURS	11.5 hr
AVAILABLE HOURS	11.5 hr
ACTUAL PROCESS HOURS (total 20-sec records)	10.21 hr
DOWN-TIME	1.29 hr
TOTAL SYSTEM PAUSE	0.01 hr
NONAVAILABLE HOURS	0.0 hr
START-UP	0.46 hr
SHUT-DOWN	0.83 hr
PLANT PERFORMANCE	88.8%
PRODUCTIVITY	88.8%

TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 2,181

NONPROCESS RECORDS (Test, calibration, etc) 2

20-SEC PROCESS RECORDS

TOTAL SORT	1,838
NO SORT	0 MD>0 & MND=0
SOME SORT	1,582 AD=0 & MD=0 & MND>0
UNEXPLAINED RECORDS	256 AD>0&0<MD<MNDmax&MND<MNDmax
	0

	0<AD<1kBq & MD>0	0	UNEXPLAIN	PAUSE
	AD=0 & MD	0	TIME	TIME
	AD<0 & MD	0	None	08:01
ACT_P <5 kBq	58	16.9%		

JA SOIL CLEANUP PLANT LOG SUMMARY

2-SEC COUNT PERIODS 18,380
 2-SEC RECORDS WITH SORTS 343 (ACT_P >0 kBq)
 2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR
 2 DETECTORS 71 82.6%
 3 DETECTORS 12 14.0%
 4 DETECTORS 3 3.5%
 5 DETECTORS 0 0.0%
 6 DETECTORS 0 0.0%
 7 DETECTORS 0 0.0%
 8 DETECTORS 0 0.0%
 TOTAL 86
 NET 2-SEC RECORDS WITH SORTS 257
 2-SEC PERIODS WITH NO SORTS 18,123
 AVG TIME BETWEEN 2-SEC SORTS 143.0 sec

1-GATE SORTS	175	ACT_ND	NUMBER	SPEC_A	ACT_P	SORT FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)
1	4	2.3%	-14000	0	-241	4000	19 5.5%
2	17	9.7%	-12000	0	-206	8000	148 43.1%
3	25	14.3%	-10000	1	-172	12000	54 15.7%
4	29	16.6%	-8000	0	-137	16000	32 9.3%
5	39	22.3%	-6000	2	-103	20000	13 3.8%
6	25	14.3%	-4000	3	-69	24000	18 5.2%
7	29	16.6%	-2000	23	-34	28000	9 2.6%
8	7	4.0%	0	104	0	32000	5 1.5%
TOTAL	175		2000	284	34	36000	4 1.2%
			4000	455	69	40000	7 2.0%
2-GATE SORTS	168	6000	456	103		44000	2 0.6%
DETECTR	SORTS	FREQ%	8000	299	137	48000	3 0.9%
8			10000	151	172	52000	1 0.3%
9	12	7.1%	12000	48	206	56000	2 0.6%
10	19	11.3%	14000	10	241	60000	2 0.6%
11	25	14.9%	16000	3	275	64000	4 1.2%
12	39	23.2%	18000	1	309	68000	4 1.2%
13	39	23.2%	20000	0	344	72000	2 0.6%
14	21	12.5%	22000	0	378	76000	3 0.9%
15	13	7.7%	24000	0	412	80000	2 0.6%
TOTAL	168		26000	0	447	84000	1 0.3%
			>28000	0	0	>84000	8 2.3%
			TOTAL	1840		TOTAL	343

SUMMARY TOTALS

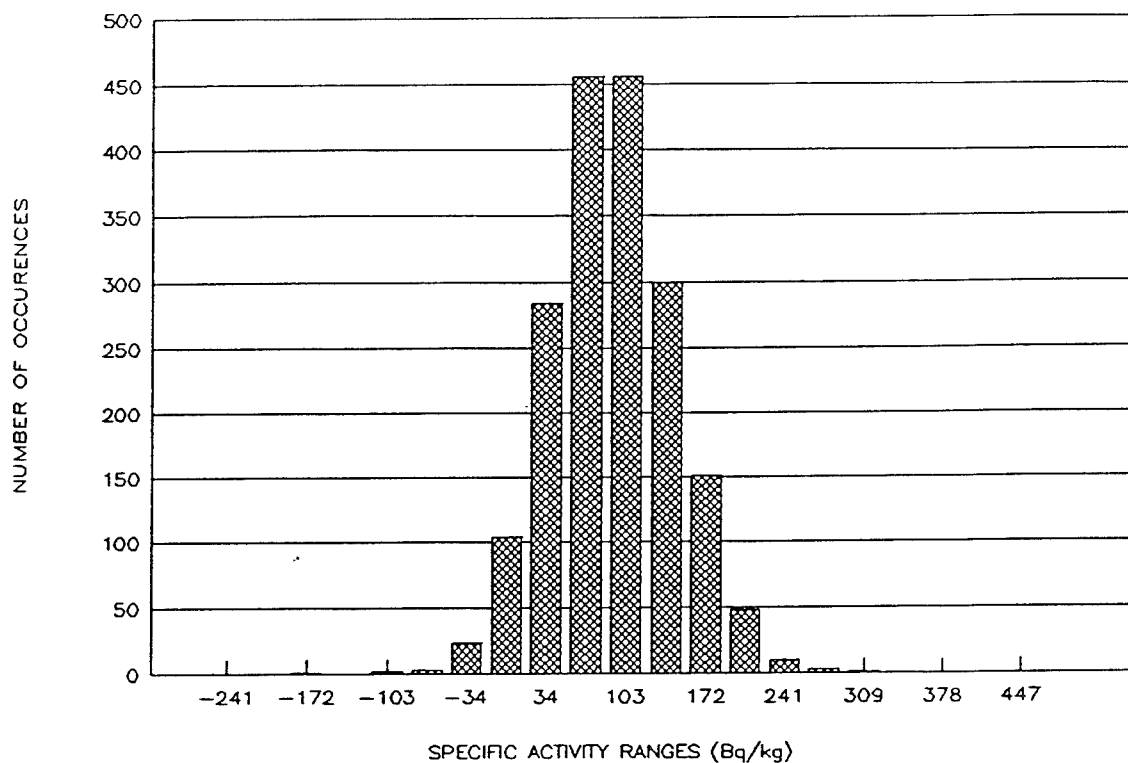
HOT PARTICLE EVENTS	341	SORTS BY ONE GATE ONLY	175
MULTIPARTICLE EVENTS	133	SORTS BY TWO GATES	168
DISTRIBUTED EVENTS	0		

REC CODE EXPLANATION

1.00 Source check (Soil on belt)
 2.00 Empty belt
 3.00 Test (No process soil)

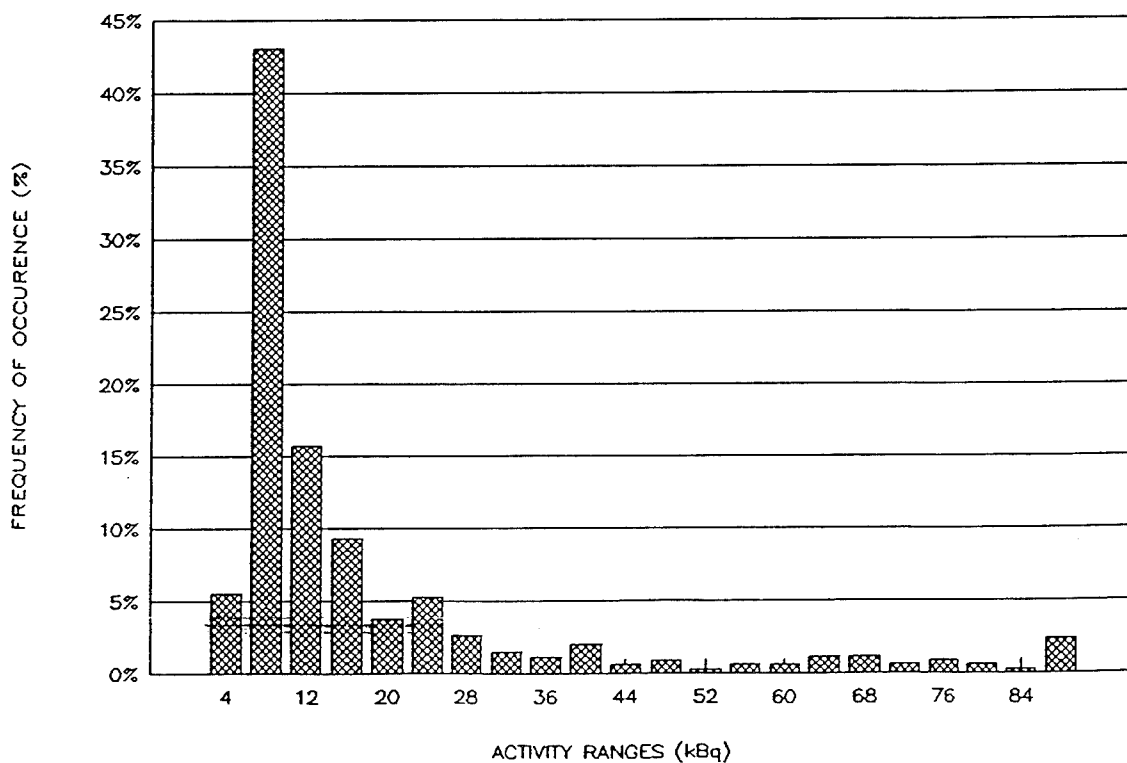
CLEAN SOIL SPECIFIC ACTIVITY

SORTER 1 LOG DATA FOR 14-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 14-Jul-93



JA SOIL CLEANUP PLANT LOG SUMMARY

SORTER 2 14-Jul-93

AVERAGE BACKGROUND COUNT RATE	0.80 ± 0.01 c/sec		
SORTER SOIL DENSITY	1.3 tons/m ³		
GROUND SOIL DENSITY	1.65 tons/m ³		
	CONTAMINATED	CLEAN	
MASS TOTAL	0.37 tons	106.3 tons	
MAXIMUM/SORT	8 kg	58.3 kg	
MINIMUM/SORT	0.7 kg	50.2 kg	
WEIGHT RECOVERY OR VOLUME RECOVERY			99.7%
EQUIVALENT SOIL-IN-GROUND	0.29 yd ³	84.3 yd ³	84.6 yd ³ /day
PARTICLE ACTIVITY (MAXIMUM ESTIMATE)			
TOTAL	7,595 kBq		
MAXIMUM/SORT	207 kBq		
MINIMUM/SORT	3.3 kBq		
DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY	2,536 kBq	10,570 kBq	
MAXIMUM/SORT	173 kBq	17 kBq	
MINIMUM/SORT	0 Bq	-3 kBq	
SPECIFIC ACTIVITY	6,834 Bq/kg	99 Bq/kg	
WORK HISTORY			
WORK DAY START	05:00 AM	WORK DAY END	04:30 PM
PLANT START-UP	05:00 AM	PLANT SHUT-DOWN	04:30 PM
START SOIL PROCESSING	05:29 AM	END SOIL PROCESSING	03:38 PM
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 hr
WORK HOURS	11.5 hr		
AVAILABLE HOURS	11.5 hr		
ACTUAL PROCESS HOURS (total 20-sec records)	10.17 hr		
DOWN-TIME	1.33 hr		
TOTAL SYSTEM PAUSE	0.00 hr		
NONAVAILABLE HOURS	0.0 hr		
START-UP	0.48 hr		
SHUT-DOWN	0.85 hr		
PLANT PERFORMANCE	88.4%		
PRODUCTIVITY	88.4%		
TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)	2,174		
NONPROCESS RECORDS (Test, calibration, etc)	11		
20-SEC PROCESS RECORDS	1,830		
TOTAL SORT	0 MD>0 & MND=0		
NO SORT	1,567 AD=0 & MD=0 & MND>0		
SOME SORT	263 AD>0&0<MD<MNDmax&MND<MNDmax		
UNEXPLAINED RECORDS	0		
0<AD<1kBq & MD>0	0	UNEXPLAIN	PAUSE
AD=0 & MD	0	TIME	TIME
AD<0 & MD	0	None	None
ACT_P <5 kBq	53 15.4%		

JA SOIL CLEANUP PLANT LOG SUMMARY

2-SEC COUNT PERIODS 18,300
 2-SEC RECORDS WITH SORTS 344 (ACT_P >0 kBq)
 2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR
 2 DETECTORS 95 83.3%
 3 DETECTORS 17 14.9%
 4 DETECTORS 2 1.8%
 5 DETECTORS 0 0.0%
 6 DETECTORS 0 0.0%
 7 DETECTORS 0 0.0%
 8 DETECTORS 0 0.0%
 TOTAL 114
 NET 2-SEC RECORDS WITH SORTS 230
 2-SEC PERIODS WITH NO SORTS 18,070
 AVG TIME BETWEEN 2-SEC SORTS 159.1 sec

1-GATE SORTS		172	ACT_NO	NUMBER	SPEC_A	ACT_P	SORT FREQ%		ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)		(kBq)
1	9	5.2%	-14000	0	-240	4000	9	2.6%	4
2	28	16.3%	-12000	0	-206	8000	141	41.0%	8
3	21	12.2%	-10000	0	-172	12000	46	13.4%	12
4	32	18.6%	-8000	1	-137	16000	29	8.4%	16
5	32	18.6%	-6000	4	-103	20000	19	5.5%	20
6	23	13.4%	-4000	1	-69	24000	18	5.2%	24
7	22	12.8%	-2000	15	-34	28000	11	3.2%	28
8	5	2.9%	0	49	0	32000	6	1.7%	32
TOTAL	172		2000	174	34	36000	4	1.2%	36
			4000	295	69	40000	3	0.9%	40
2-GATE SORTS		172	6000	401	103	44000	7	2.0%	44
DETECTR	SORTS	FREQ%	8000	448	137	48000	3	0.9%	48
8			10000	296	172	52000	4	1.2%	52
9	19	11.0%	12000	113	206	56000	7	2.0%	56
10	23	13.4%	14000	36	240	60000	7	2.0%	60
11	29	16.9%	16000	7	274	64000	2	0.6%	64
12	31	18.0%	18000	1	309	68000	3	0.9%	68
13	29	16.9%	20000	0	343	72000	3	0.9%	72
14	26	15.1%	22000	0	377	76000	4	1.2%	76
15	15	8.7%	24000	0	412	80000	2	0.6%	80
TOTAL	172		26000	0	446	84000	2	0.6%	84
			>28000	0	0	>84000	14	4.1%	>84
			TOTAL	1841		TOTAL	344		

SUMMARY TOTALS

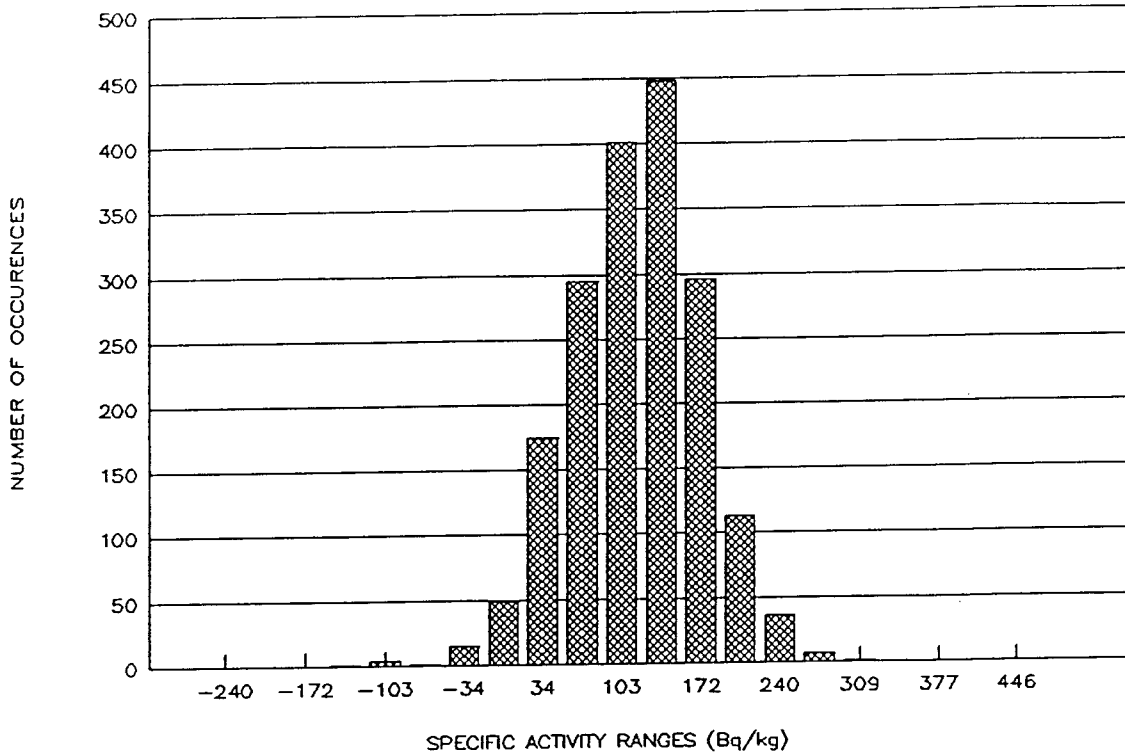
HOT PARTICLE EVENTS	339	SORTS BY ONE GATE ONLY	172
MULTIPARTICLE EVENTS	171	SORTS BY TWO GATES	172
DISTRIBUTED EVENTS	0		

REC CODE EXPLANATION

1.00 Source check (Soil on belt)
 2.00 Empty belt
 3.00 Test (No process soil)

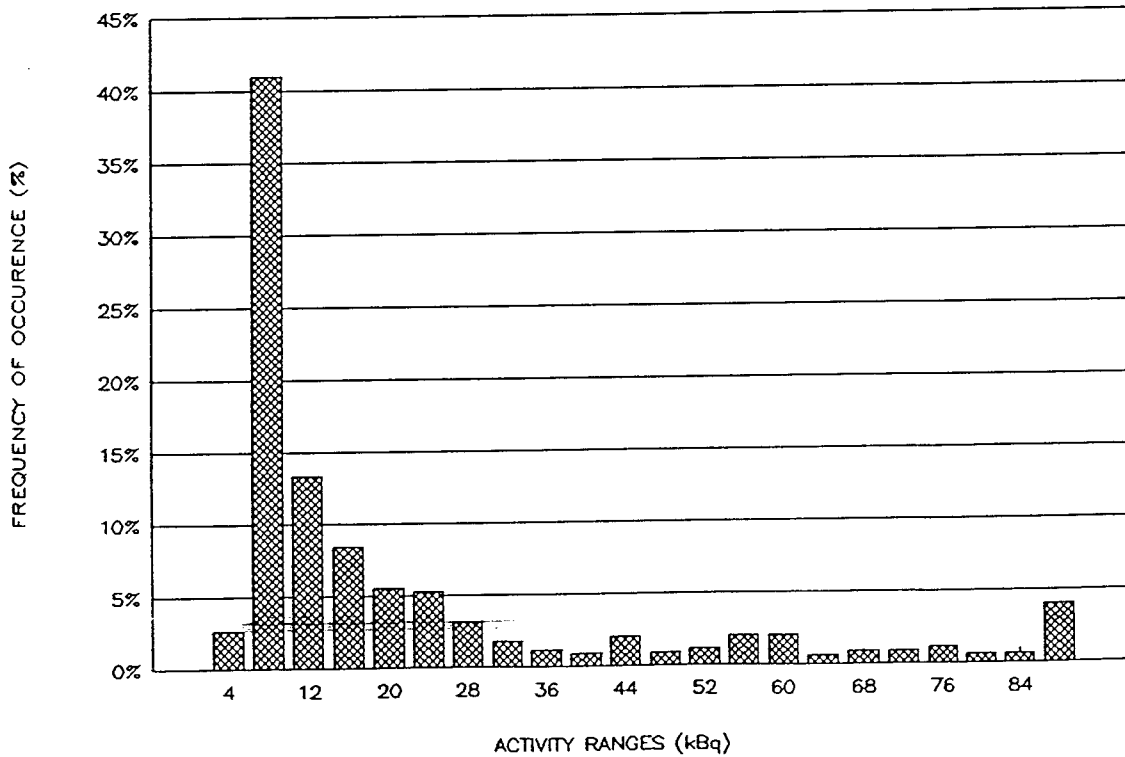
CLEAN SOIL SPECIFIC ACTIVITY

SORTER 2 LOG DATA FOR 14-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 14-Jul-93



JA SOIL CLEANUP PLANT LOG SUMMARY

SORTER 1 15-Jul-93

AVERAGE BACKGROUND COUNT RATE 0.74 ± 0.05 c/sec
 SORTER SOIL DENSITY 1.3 tons/m³
 GROUND SOIL DENSITY 1.65 tons/m³

	CONTAMINATED	CLEAN
MASS TOTAL	0.34 tons	94.2 tons
MAXIMUM/SORT	61.1 kg	58.2 kg
MINIMUM/SORT	0.7 kg	52.4 kg

WEIGHT RECOVERY OR VOLUME RECOVERY		99.6%
EQUIVALENT SOIL-IN-GROUND	0.27 yd ³	74.7 yd ³ 75.0 yd ³ /day

PARTICLE ACTIVITY (MAXIMUM ESTIMATE)

TOTAL	5,437 kBq
MAXIMUM/SORT	377 kBq
MINIMUM/SORT	2.9 kBq

DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY	1,846 kBq	7,096 kBq
MAXIMUM/SORT	186 kBq	17 kBq
MINIMUM/SORT	0 Bq	-5 kBq
SPECIFIC ACTIVITY	5,435 Bq/kg	75 Bq/kg

WORK HISTORY

WORK DAY START	05:00 AM
PLANT START-UP	05:00 AM
START SOIL PROCESSING	05:43 AM
LUNCH START	11:30 AM

WORK DAY END	03:30 PM
PLANT SHUT-DOWN	03:30 PM
END SOIL PROCESSING	02:52 PM
LUNCH PERIOD	0.0 hr

WORK HOURS	10.5 hr
AVAILABLE HOURS	10.5 hr
ACTUAL PROCESS HOURS (total 20-sec records)	9.03 hr
DOWN-TIME	1.47 hr
TOTAL SYSTEM PAUSE	0.14 hr
NONAVAILABLE HOURS	0.0 hr
START-UP	0.73 hr
SHUT-DOWN	0.62 hr
PLANT PERFORMANCE	86.0%
PRODUCTIVITY	86.0%

TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 1,894

NONPROCESS RECORDS (Test, calibration, etc) 22

20-SEC PROCESS RECORDS

TOTAL SORT	1,625
NO SORT	1 MD>0 & MND=0
SOME SORT	1,412 AD=0 & MD=0 & MND>0
UNEXPLAINED RECORDS	212 AD>0&0<MD<MNDmax&MND<MNDmax
0<AD<1kBq & MD>0	0

AD=0 & MD	1	UNEXPLAIN	PAUSE
AD<0 & MD	0	TIME	TIME
ACT_P <5 kBq	66 24.5%	06:19:28	06:11

JA SOIL CLEANUP PLANT LOG SUMMARY

2-SEC COUNT PERIODS 16,250
 2-SEC RECORDS WITH SORTS 269 (ACT_P >0 kBq)
 2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR
 2 DETECTORS 70 85.4%
 3 DETECTORS 11 13.4%
 4 DETECTORS 1 1.2%
 5 DETECTORS 0 0.0%
 6 DETECTORS 0 0.0%
 7 DETECTORS 0 0.0%
 8 DETECTORS 0 0.0%
 TOTAL 82
 NET 2-SEC RECORDS WITH SORTS 187
 2-SEC PERIODS WITH NO SORTS 16,063
 AVG TIME BETWEEN 2-SEC SORTS 173.8 sec

1-GATE SORTS	142	ACT_NO	NUMBER	SPEC_A	ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)	(kBq)
1	2	1.4%	-14000	0	-241	4000	20	7.4%
2	13	9.2%	-12000	0	-206	8000	101	37.5%
3	24	16.9%	-10000	2	-172	12000	44	16.4%
4	21	14.8%	-8000	4	-137	16000	38	14.1%
5	21	14.8%	-6000	7	-103	20000	8	3.0%
6	25	17.6%	-4000	11	-69	24000	6	2.2%
7	28	19.7%	-2000	18	-34	28000	8	3.0%
8	8	5.6%	0	93	0	32000	5	1.9%
TOTAL	142		2000	224	34	36000	2	0.7%
			4000	408	69	40000	3	1.1%
2-GATE SORTS	127		6000	432	103	44000	1	0.4%
DETECTR	SORTS	FREQ%	8000	286	137	48000	1	0.4%
8			10000	116	172	52000	3	1.1%
9	5	3.9%	12000	40	206	56000	4	1.5%
10	15	11.8%	14000	5	241	60000	6	2.2%
11	31	24.4%	16000	0	275	64000	2	0.7%
12	20	15.7%	18000	1	309	68000	2	0.7%
13	21	16.5%	20000	0	344	72000	4	1.5%
14	18	14.2%	22000	0	378	76000	2	0.7%
15	17	13.4%	24000	0	412	80000	3	1.1%
TOTAL	127		26000	0	447	84000	0	0.0%
			>28000	0	0	>84000	6	2.2%
			TOTAL	1647		TOTAL	269	

SUMMARY TOTALS

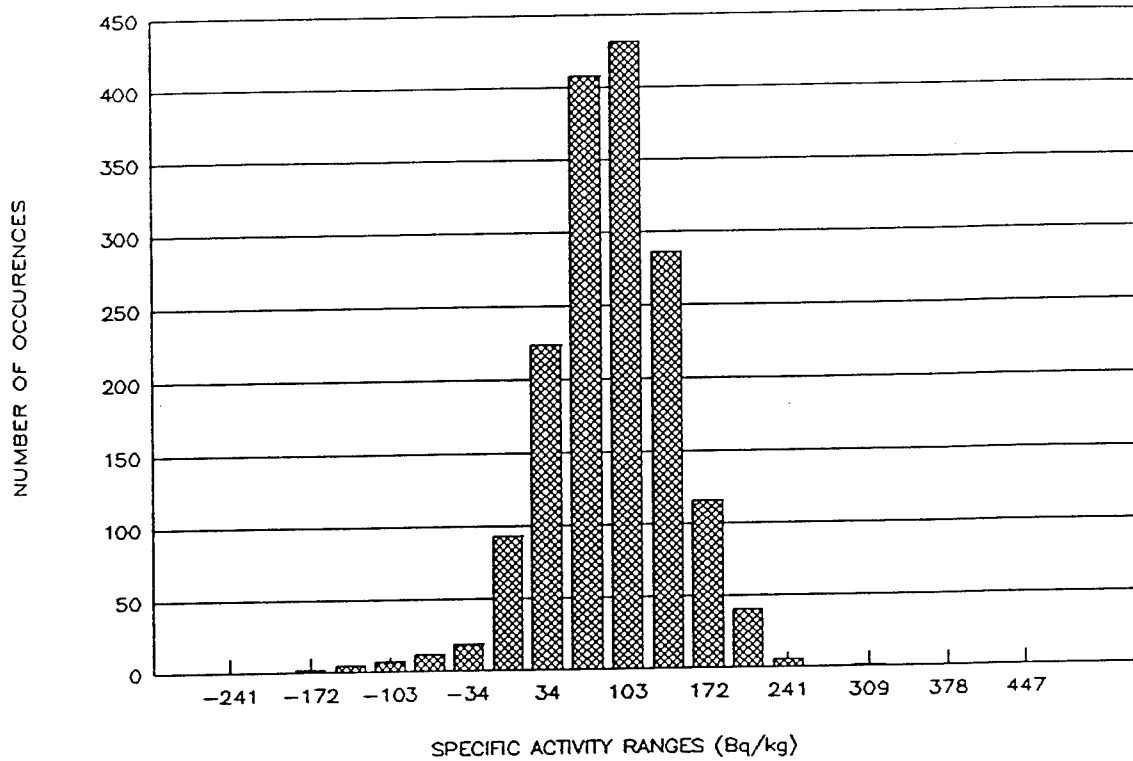
HOT PARTICLE EVENTS	264	SORTS BY ONE GATE ONLY	142
MULTIPARTICLE EVENTS	118	SORTS BY TWO GATES	127
DISTRIBUTED EVENTS	83		

REC CODE EXPLANATION

- 1.00 Source check (Soil on belt)
- 2.00 Empty belt
- 3.00 Test (No process soil)

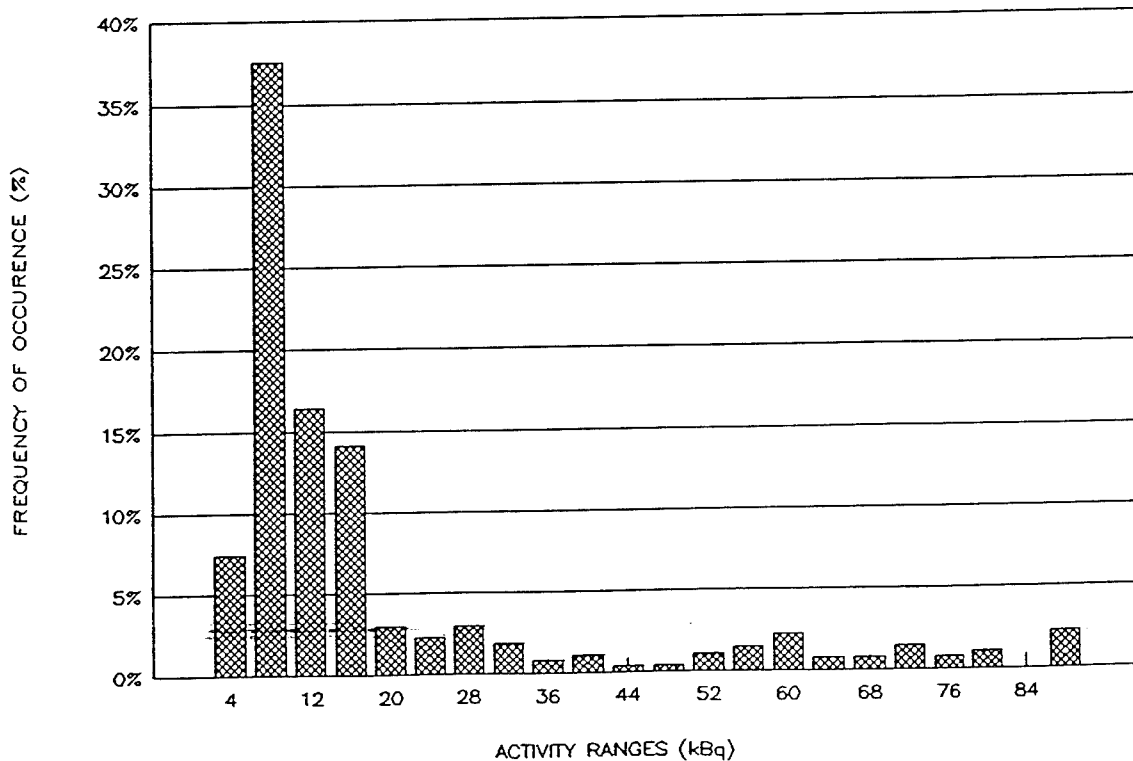
CLEAN SOIL SPECIFIC ACTIVITY

SORTER 1 LOG DATA FOR 15-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 15-Jul-93



JA SOIL CLEANUP PLANT LOG SUMMARY

SORTER 2 15-Jul-93

AVERAGE BACKGROUND COUNT RATE 0.79 ± 0.03 c/sec
 SORTER SOIL DENSITY 1.3 tons/m³
 GROUND SOIL DENSITY 1.65 tons/m³

	CONTAMINATED	CLEAN
MASS TOTAL	0.35 tons	95.3 tons
MAXIMUM/SORT	61.3 kg	58.3 kg
MINIMUM/SORT	0.7 kg	52.4 kg

WEIGHT RECOVERY OR VOLUME RECOVERY			99.6%
EQUIVALENT SOIL-IN-GROUND	0.28 yd ³	75.5 yd ³	75.8 yd ³ /day

PARTICLE ACTIVITY (MAXIMUM ESTIMATE)

TOTAL	6,927 kBq
MAXIMUM/SORT	759 kBq
MINIMUM/SORT	3.8 kBq

DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY		
MAXIMUM/SORT	2,291 kBq	2,691 kBq
MINIMUM/SORT	345 kBq	14 kBq
SPECIFIC ACTIVITY	0 Bq	-8 kBq
	6,552 Bq/kg	28 Bq/kg

WORK HISTORY

WORK DAY START	05:00 AM
PLANT START-UP	05:00 AM
START SOIL PROCESSING	05:43 AM
LUNCH START	11:30 AM

WORK DAY END	03:30 PM
PLANT SHUT-DOWN	03:30 PM
END SOIL PROCESSING	02:57 PM
LUNCH PERIOD	0.0 hr

WORK HOURS	10.5 hr
AVAILABLE HOURS	10.5 hr
ACTUAL PROCESS HOURS (total 20-sec records)	9.11 hr
DOWN-TIME	1.39 hr
TOTAL SYSTEM PAUSE	0.14 hr
NONAVAILABLE HOURS	0.0 hr
START-UP	0.73 hr
SHUT-DOWN	0.54 hr
PLANT PERFORMANCE	86.8%
PRODUCTIVITY	86.8%

TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 1,923

NONPROCESS RECORDS (Test, calibration, etc) 7

20-SEC PROCESS RECORDS

TOTAL SORT	1,640
NO SORT	1 MD>0 & MND=0
SOME SORT	1,420 AD=0 & MD=0 & MND>0
UNEXPLAINED RECORDS	219 AD>0&0<MD<MNDmax&MND<MNDmax
	0

		UNEXPLAIN	PAUSE
		TIME	TIME
0<AD<1kBq & MD>0	0	06:19:28	06:11
AD=0 & MD	1		
AD<0 & MD	0		
ACT_P <5 kBq	31 11.0%		

JA SOIL CLEANUP PLANT LOG SUMMARY

2-SEC COUNT PERIODS 16,400
 2-SEC RECORDS WITH SORTS 283 (ACT_P >0 kBq)
 2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR
 2 DETECTORS 64 86.5%
 3 DETECTORS 10 13.5%
 4 DETECTORS 0 0.0%
 5 DETECTORS 0 0.0%
 6 DETECTORS 0 0.0%
 7 DETECTORS 0 0.0%
 8 DETECTORS 0 0.0%
 TOTAL 74
 NET 2-SEC RECORDS WITH SORTS 209
 2-SEC PERIODS WITH NO SORTS 16,191
 AVG TIME BETWEEN 2-SEC SORTS 156.9 sec

1-GATE SORTS	159	ACT_NO	NUMBER	SPEC_A	ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)	(kBq)
1	6	3.8%	-14000	0	-240	4000	4	1.4%
2	23	14.5%	-12000	0	-206	8000	99	35.0%
3	23	14.5%	-10000	1	-172	12000	62	21.9%
4	36	22.6%	-8000	1	-137	16000	35	12.4%
5	28	17.6%	-6000	9	-103	20000	9	3.2%
6	23	14.5%	-4000	56	-69	24000	15	5.3%
7	16	10.1%	-2000	131	-34	28000	9	3.2%
8	4	2.5%	0	311	0	32000	2	0.7%
TOTAL	159		2000	452	34	36000	2	0.7%
			4000	334	69	40000	5	1.8%
2-GATE SORTS	124		6000	183	103	44000	4	1.4%
DETECTR	SORTS	FREQ%	8000	108	137	48000	4	1.4%
8			10000	40	172	52000	1	0.4%
9	9	7.3%	12000	15	206	56000	2	0.7%
10	14	11.3%	14000	5	240	60000	3	1.1%
11	21	16.9%	16000	1	274	64000	1	0.4%
12	28	22.6%	18000	0	309	68000	6	2.1%
13	22	17.7%	20000	0	343	72000	3	1.1%
14	20	16.1%	22000	0	377	76000	5	1.8%
15	10	8.1%	24000	0	412	80000	2	0.7%
TOTAL	124		26000	0	446	84000	1	0.4%
			>28000	0	0	>84000	9	3.2%
			TOTAL	1647		TOTAL	283	

SUMMARY TOTALS

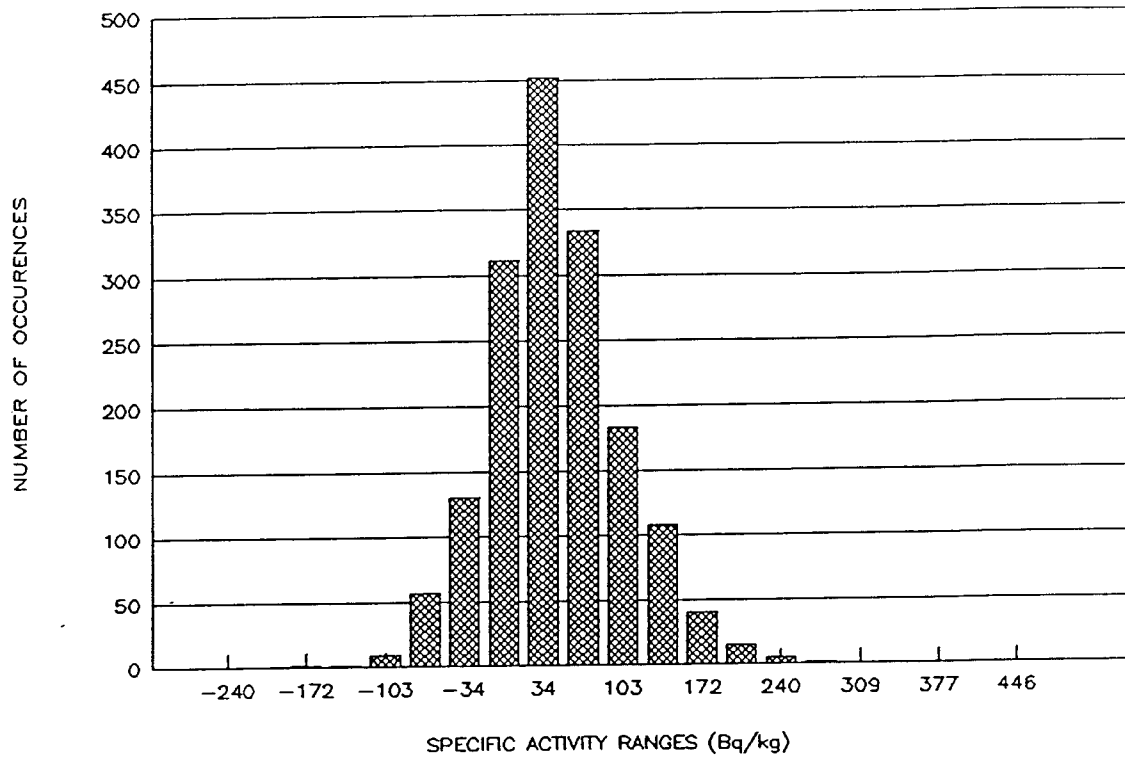
HOT PARTICLE EVENTS	258	SORTS BY ONE GATE ONLY	159
MULTIPARTICLE EVENTS	138	SORTS BY TWO GATES	124
DISTRIBUTED EVENTS	84		

REC CODE EXPLANATION

1.00 Source check (Soil on belt)
 2.00 Empty belt
 3.00 Test (No process soil)

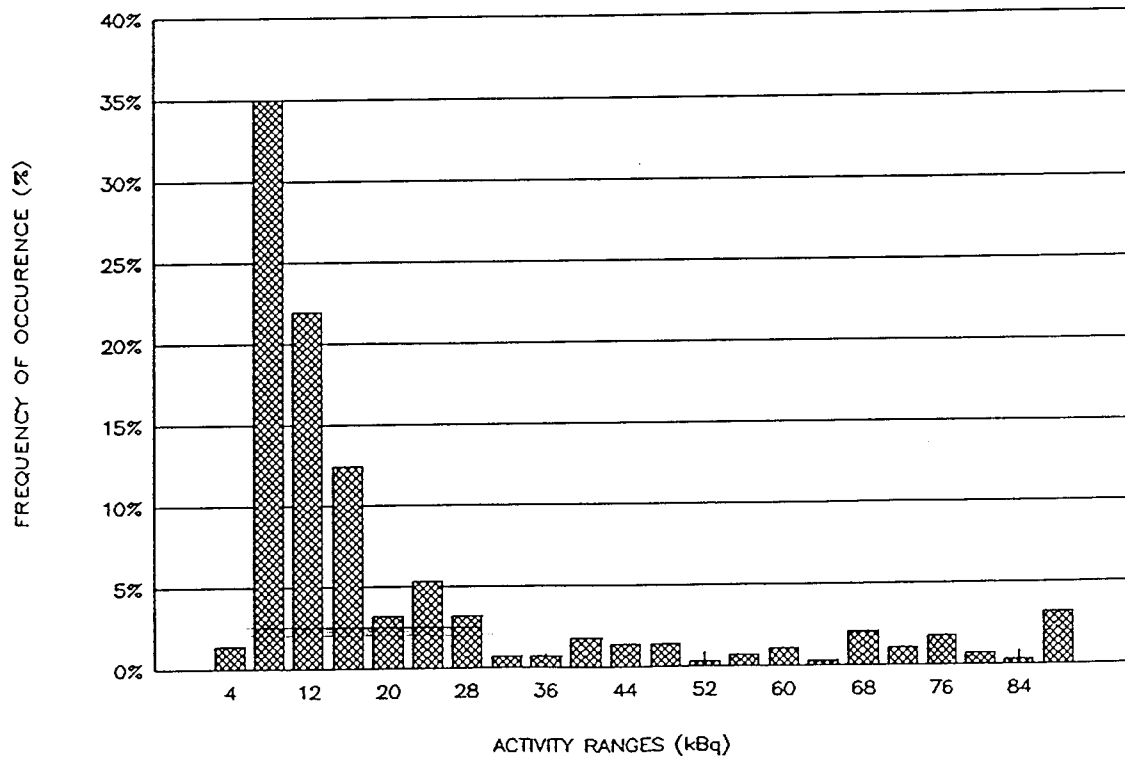
CLEAN SOIL SPECIFIC ACTIVITY

SORTER 2 LOG DATA FOR 15-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 15-Jul-93



JA SOIL CLEANUP PLANT LOG SUMMARY

SORTER 1 16-Jul-93

AVERAGE BACKGROUND COUNT RATE 0.74 ± 0.04 c/sec
 SORTER SOIL DENSITY 1.3 tons/m³
 GROUND SOIL DENSITY 1.65 tons/m³

	CONTAMINATED	CLEAN
MASS TOTAL	0.72 tons	81.5 tons
MAXIMUM/SORT	58.2 kg	58.2 kg
MINIMUM/SORT	0.7 kg	49.5 kg

WEIGHT RECOVERY OR VOLUME RECOVERY		99.1%
EQUIVALENT SOIL-IN-GROUND	0.57 yd ³	64.6 yd ³ 65.2 yd ³ /day

PARTICLE ACTIVITY (MAXIMUM ESTIMATE)

TOTAL	9,465 kBq
MAXIMUM/SORT	589 kBq
MINIMUM/SORT	2.9 kBq

DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY

	3,460 kBq	7,456 kBq
MAXIMUM/SORT	300 kBq	21 kBq
MINIMUM/SORT	0 Bq	-4 kBq
SPECIFIC ACTIVITY	4,807 Bq/kg	92 Bq/kg

WORK HISTORY

WORK DAY START	05:00 AM	WORK DAY END	03:30 PM
PLANT START-UP	05:00 AM	PLANT SHUT-DOWN	03:30 PM
START SOIL PROCESSING	05:43 AM	END SOIL PROCESSING	03:03 PM
LUNCH START	11:30 AM	LUNCH PERIOD	0.5 hr

WORK HOURS	10.0 hr
AVAILABLE HOURS	10.0 hr
ACTUAL PROCESS HOURS (total 20-sec records)	7.84 hr
DOWN-TIME	2.16 hr
TOTAL SYSTEM PAUSE	1.50 hr
NONAVAILABLE HOURS	0.0 hr
START-UP	0.73 hr
SHUT-DOWN	0.44 hr
PLANT PERFORMANCE	78.4%
PRODUCTIVITY	78.4%

TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 1,982

NONPROCESS RECORDS (Test, calibration, etc) 1

20-SEC PROCESS RECORDS

TOTAL SORT	1,412
NO SORT	2 MD>0 & MND=0
SOME SORT	1,090 AD=0 & MD=0 & MND>0
UNEXPLAINED RECORDS	320 AD>0&0<MD<MNDmax&MND<MNDmax
	0

0<AD<1kBq & MD>0	0	UNEXPLAIN	PAUSE
AD=0 & MD	0	TIME	TIME
AD<0 & MD	0	None	11:25
ACT_P <5 kBq	115	20.2%	

JA SOIL CLEANUP PLANT LOG SUMMARY

2-SEC COUNT PERIODS 14,120
 2-SEC RECORDS WITH SORTS 570 (ACT_P >0 kBq)
 2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR
 2 DETECTORS 134 82.7%
 3 DETECTORS 25 15.4%
 4 DETECTORS 3 1.9%
 5 DETECTORS 0 0.0%
 6 DETECTORS 0 0.0%
 7 DETECTORS 0 0.0%
 8 DETECTORS 0 0.0%
 TOTAL 162
 NET 2-SEC RECORDS WITH SORTS 408
 2-SEC PERIODS WITH NO SORTS 13,712
 AVG TIME BETWEEN 2-SEC SORTS 69.2 sec

1-GATE SORTS		291	ACT_ND	NUMBER	SPEC_A	ACT_P	SORT FREQ%		ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)		(kBq)
1	1	0.3%	-14000	0	-241	4000	28	4.9%	4
2	20	6.9%	-12000	0	-206	8000	263	46.1%	8
3	39	13.4%	-10000	1	-172	12000	99	17.4%	12
4	51	17.5%	-8000	0	-137	16000	42	7.4%	16
5	59	20.3%	-6000	0	-103	20000	26	4.6%	20
6	52	17.9%	-4000	1	-69	24000	22	3.9%	24
7	48	16.5%	-2000	19	-34	28000	15	2.6%	28
8	21	7.2%	0	61	0	32000	14	2.5%	32
TOTAL	291		2000	187	34	36000	7	1.2%	36
			4000	316	69	40000	5	0.9%	40
2-GATE SORTS		279	6000	349	103	44000	10	1.8%	44
DETECTR	SORTS	FREQ%	8000	200	137	48000	5	0.9%	48
8			10000	125	172	52000	6	1.1%	52
9	6	2.2%	12000	62	206	56000	2	0.4%	56
10	33	11.8%	14000	28	241	60000	4	0.7%	60
11	48	17.2%	16000	33	275	64000	1	0.2%	64
12	60	21.5%	18000	20	309	68000	2	0.4%	68
13	54	19.4%	20000	7	344	72000	5	0.9%	72
14	43	15.4%	22000	4	378	76000	1	0.2%	76
15	35	12.5%	24000	0	412	80000	2	0.4%	80
TOTAL	279		26000	0	447	84000	2	0.4%	84
			>28000	0	0	>84000	9	1.6%	>84
			TOTAL	1413		TOTAL	570		

SUMMARY TOTALS

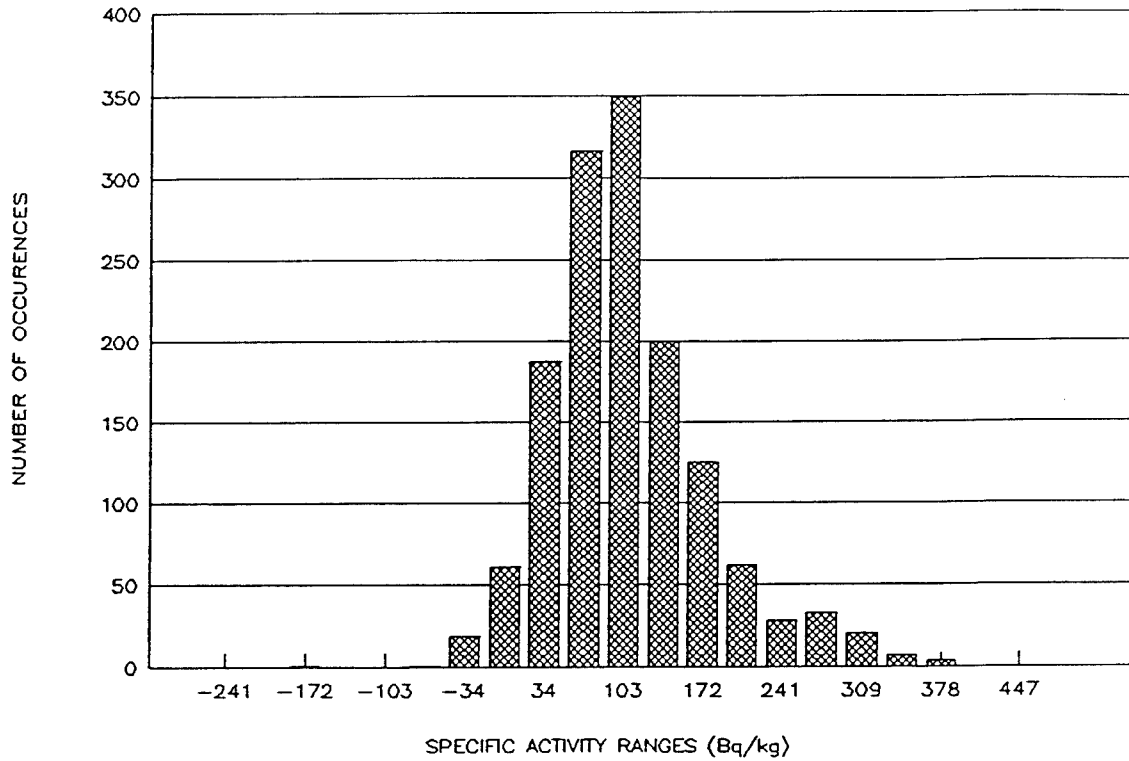
HOT PARTICLE EVENTS	551	SORTS BY ONE GATE ONLY	291
MULTIPARTICLE EVENTS	286	SORTS BY TWO GATES	279
DISTRIBUTED EVENTS	152		

REC CODE EXPLANATION

1.00 Source check (Soil on belt)
 2.00 Empty belt
 3.00 Test (No process soil)

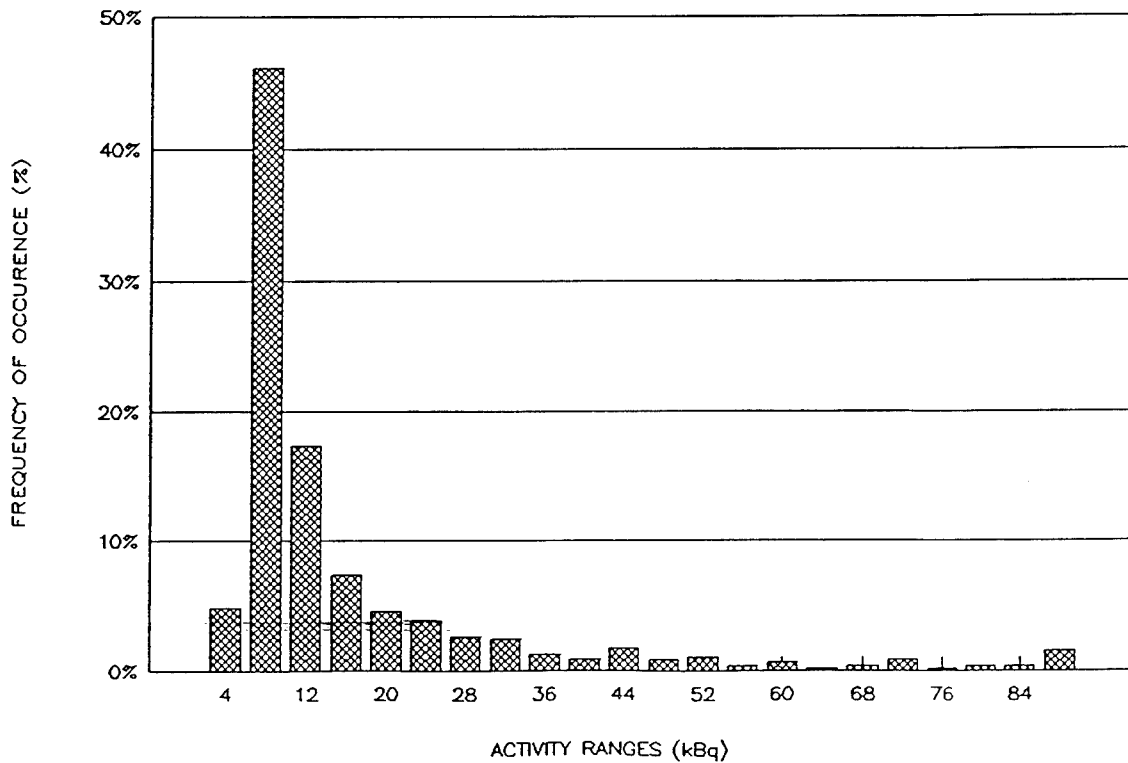
CLEAN SOIL SPECIFIC ACTIVITY

SORTER 1 LOG DATA FOR 16-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 16-Jul-93



JA SOIL CLEANUP PLANT LOG SUMMARY

SORTER 2 16-Jul-93

AVERAGE BACKGROUND COUNT RATE 0.79 ± 0.03 c/sec
 SORTER SOIL DENSITY 1.3 tons/m³
 GROUND SOIL DENSITY 1.65 tons/m³

	CONTAMINATED	CLEAN
MASS TOTAL	0.78 tons	81.2 tons
MAXIMUM/SORT	58.3 kg	58.3 kg
MINIMUM/SORT	0.7 kg	50.2 kg

WEIGHT RECOVERY OR VOLUME RECOVERY		99.0%
EQUIVALENT SOIL-IN-GROUND	0.62 yd ³	64.3 yd ³ 65.0 yd ³ /day

PARTICLE ACTIVITY (MAXIMUM ESTIMATE)

TOTAL	16,341 kBq
MAXIMUM/SORT	1,783 kBq
MINIMUM/SORT	3.2 kBq

DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY	4,832 kBq	3,607 kBq
MAXIMUM/SORT	1112 kBq	20 kBq
MINIMUM/SORT	-142 Bq	-8 kBq
SPECIFIC ACTIVITY	6,176 Bq/kg	44 Bq/kg

WORK HISTORY

WORK DAY START	05:00 AM
PLANT START-UP	05:00 AM
START SOIL PROCESSING	05:43 AM
LUNCH START	11:30 AM

WORK DAY END	03:30 PM
PLANT SHUT-DOWN	03:30 PM
END SOIL PROCESSING	03:01 PM
LUNCH PERIOD	0.5 hr

WORK HOURS	10.0 hr
AVAILABLE HOURS	10.0 hr
ACTUAL PROCESS HOURS (total 20-sec records)	7.81 hr
DOWN-TIME	2.19 hr
TOTAL SYSTEM PAUSE	1.50 hr
NONAVAILABLE HOURS	0.0 hr
START-UP	0.73 hr
SHUT-DOWN	0.47 hr
PLANT PERFORMANCE	78.1%
PRODUCTIVITY	78.1%

TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 2,046
 NONPROCESS RECORDS (Test, calibration, etc) 7

20-SEC PROCESS RECORDS

TOTAL SORT	1,406
NO SORT	2 MD>0 & MND=0
SOME SORT	1,060 AD=0 & MD=0 & MND>0
UNEXPLAINED RECORDS	343 AD>0&0<MD<MNDmax&MND<MNDmax
0<AD<1kBq & MD>0	23
AD=0 & MD	0
AD<0 & MD	1
ACT_P <5 kBq	87 13.6%

UNEXPLAIN	PAUSE
TIME	TIME
05:48:34	11:25
05:48:54	

JA SOIL CLEANUP PLANT LOG SUMMARY

2-SEC COUNT PERIODS	14,060	05:49:14
2-SEC RECORDS WITH SORTS	640 (ACT_P >0 kBq)	05:51:54
2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR		05:52:54
2 DETECTORS	134 86.5%	05:53:34
3 DETECTORS	19 12.3%	05:56:14
4 DETECTORS	1 0.6%	05:58:14
5 DETECTORS	1 0.6%	05:59:14
6 DETECTORS	0 0.0%	05:59:34
7 DETECTORS	0 0.0%	06:03:34
8 DETECTORS	0 0.0%	06:10:54
TOTAL	155	06:12:14
NET 2-SEC RECORDS WITH SORTS	485	06:19:14
2-SEC PERIODS WITH NO SORTS	13,575	06:20:34
AVG TIME BETWEEN 2-SEC SORTS	58.0 sec	More

1-GATE SORTS	302	ACT_NO	NUMBER	SPEC_A	ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)	(kBq)
1	19	6.3%	-14000	0	-240	4000	19	3.0%
2	35	11.6%	-12000	2	-206	8000	240	37.5%
3	47	15.6%	-10000	2	-172	12000	98	15.3%
4	53	17.5%	-8000	2	-137	16000	58	9.1%
5	63	20.9%	-6000	7	-103	20000	34	5.3%
6	41	13.6%	-4000	42	-69	24000	40	6.3%
7	37	12.3%	-2000	112	-34	28000	17	2.7%
8	7	2.3%	0	227	0	32000	19	3.0%
TOTAL	302		2000	297	34	36000	17	2.7%
			4000	306	69	40000	14	2.2%
2-GATE SORTS	338		6000	181	103	44000	5	0.8%
DETECTR	SORTS	FREQ%	8000	94	137	48000	9	1.4%
8			10000	60	172	52000	5	0.8%
9	25	7.4%	12000	37	206	56000	5	0.8%
10	32	9.5%	14000	23	240	60000	10	1.6%
11	37	10.9%	16000	9	274	64000	4	0.6%
12	62	18.3%	18000	8	309	68000	7	1.1%
13	122	36.1%	20000	4	343	72000	4	0.6%
14	43	12.7%	22000	0	377	76000	6	0.9%
15	17	5.0%	24000	0	412	80000	3	0.5%
TOTAL	338		26000	0	446	84000	2	0.3%
			>28000	0	0	>84000	24	3.8%
			TOTAL	1413		TOTAL	640	

SUMMARY TOTALS

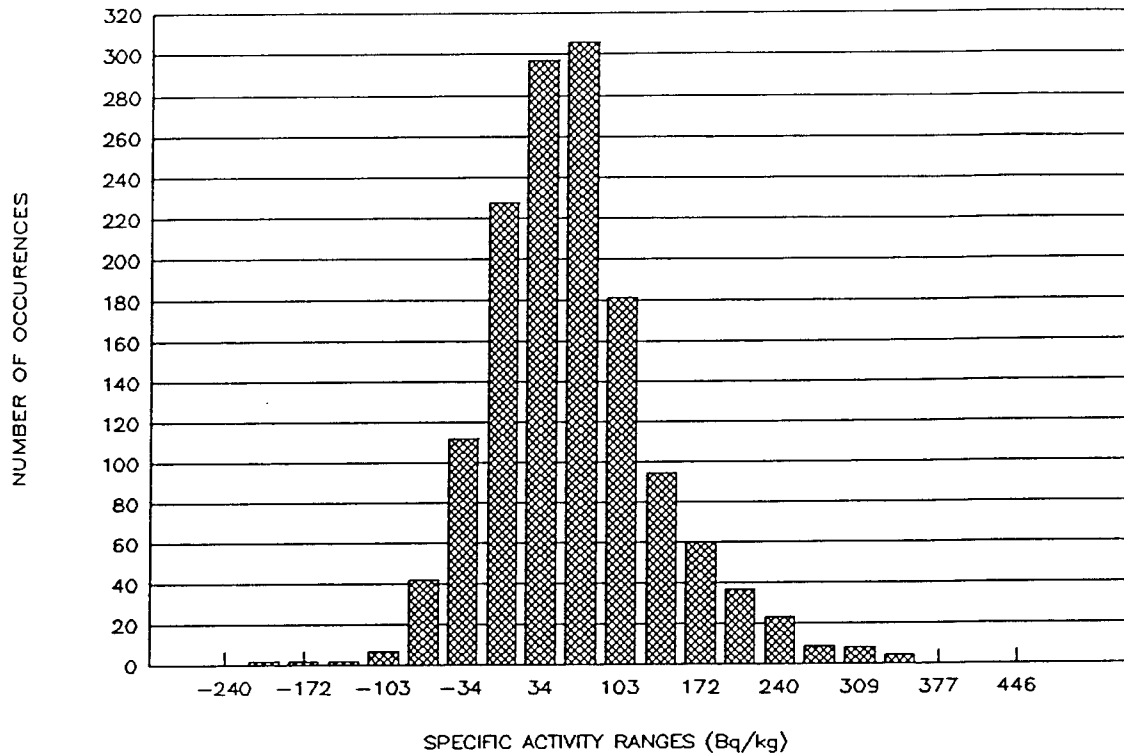
HOT PARTICLE EVENTS	680	SORTS BY ONE GATE ONLY	302
MULTIPARTICLE EVENTS	238	SORTS BY TWO GATES	338
DISTRIBUTED EVENTS	153		

REC CODE EXPLANATION

1.00 Source check (Soil on belt)
 2.00 Empty belt
 3.00 Test (No process soil)

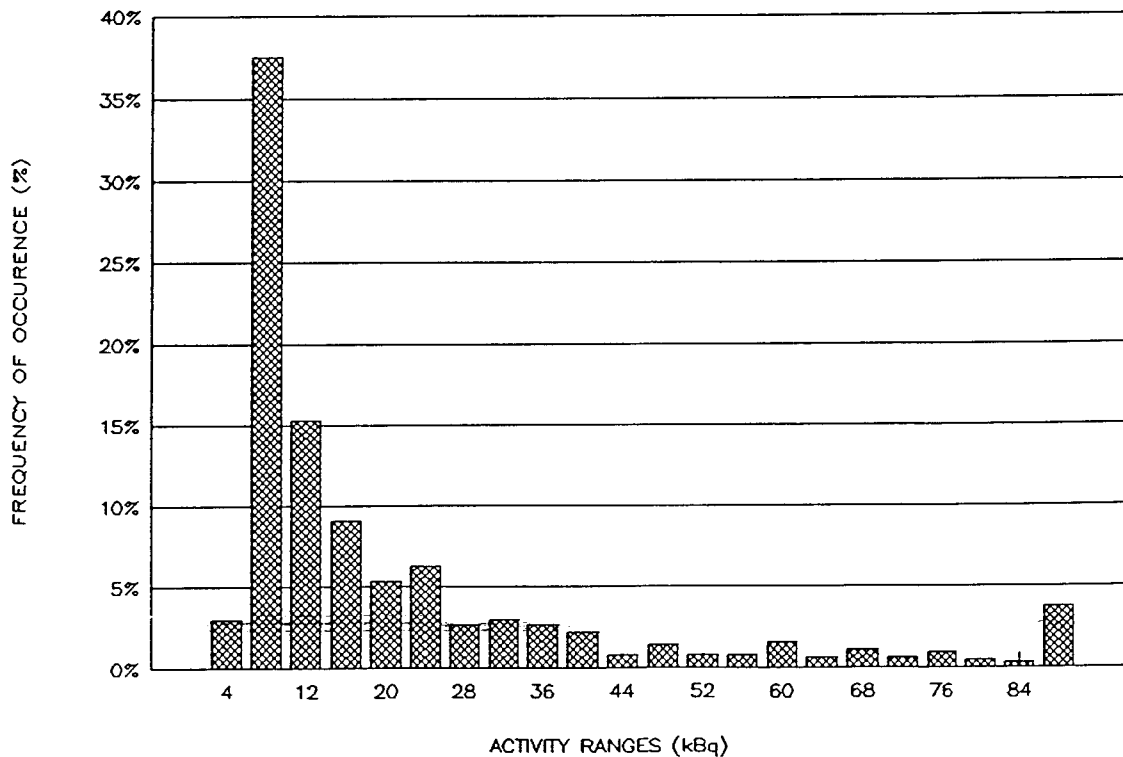
CLEAN SOIL SPECIFIC ACTIVITY

SORTER 2 LOG DATA FOR 16-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 16-Jul-93



JA SOIL CLEANUP PLANT LOG SUMMARY

SORTER 1 19-Jul-93

AVERAGE BACKGROUND COUNT RATE 0.74 ± 0.05 c/sec
 SORTER SOIL DENSITY 1.3 tons/m³
 GROUND SOIL DENSITY 1.65 tons/m³

	CONTAMINATED	CLEAN
MASS TOTAL	0.56 tons	66.3 tons
MAXIMUM/SORT	61.1 kg	58.2 kg
MINIMUM/SORT	0.7 kg	52.4 kg

WEIGHT RECOVERY OR VOLUME RECOVERY		99.2%
EQUIVALENT SOIL-IN-GROUND	0.44 yd ³	52.6 yd ³ 53.0 yd ³ /day

PARTICLE ACTIVITY (MAXIMUM ESTIMATE)

TOTAL	6,544 kBq
MAXIMUM/SORT	299 kBq
MINIMUM/SORT	2.9 kBq

DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY

	2,285 kBq	5,750 kBq
MAXIMUM/SORT	141 kBq	19 kBq
MINIMUM/SORT	0 Bq	-4 kBq
SPECIFIC ACTIVITY	4,086 Bq/kg	87 Bq/kg

WORK HISTORY

WORK DAY START	05:00 AM	WORK DAY END	03:30 PM
PLANT START-UP	05:00 AM	PLANT SHUT-DOWN	03:30 PM
START SOIL PROCESSING	05:53 AM	END SOIL PROCESSING	03:16 PM
LUNCH START	11:30 AM	LUNCH PERIOD	0.5 hr

WORK HOURS	10.0 hr
AVAILABLE HOURS	10.0 hr
ACTUAL PROCESS HOURS (total 20-sec records)	6.38 hr
DOWN-TIME	3.62 hr
TOTAL SYSTEM PAUSE	3.03 hr
NONAVAILABLE HOURS	0.0 hr
START-UP	0.89 hr
SHUT-DOWN	0.22 hr
PLANT PERFORMANCE	63.8%
PRODUCTIVITY	63.8%

TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 1,499

NONPROCESS RECORDS (Test, calibration, etc) 5

20-SEC PROCESS RECORDS

TOTAL SORT	1,149
NO SORT	3 MD>0 & MND=0
SOME SORT	884 AD=0 & MD=0 & MND>0
UNEXPLAINED RECORDS	262 AD>0&0<MD<MNDmax&MND<MNDmax
	0

		UNEXPLAIN	PAUSE
		TIME	TIME
0<AD<1kBq & MD>0	1	09:34:29	06:54
AD=0 & MD	0		
AD<0 & MD	0		
ACT_P <5 kBq	62 17.7%	12:28:50	11:21

JA SOIL CLEANUP PLANT LOG SUMMARY

2-SEC COUNT PERIODS

11,490

12:49

2-SEC RECORDS WITH SORTS

350 (ACT_P >0 kBq)

2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR

2 DETECTORS	84	86.6%
3 DETECTORS	12	12.4%
4 DETECTORS	1	1.0%
5 DETECTORS	0	0.0%
6 DETECTORS	0	0.0%
7 DETECTORS	0	0.0%
8 DETECTORS	0	0.0%

TOTAL 97

NET 2-SEC RECORDS WITH SORTS

253

2-SEC PERIODS WITH NO SORTS

11,237

AVG TIME BETWEEN 2-SEC SORTS

90.8 sec

1-GATE SORTS	177	ACT_NO	NUMBER	SPEC_A	ACT_P	SORT	FREQX	ACT_P
DETECTR	SORTS	FREQX	(Bq)	(#)	(Bq/kg)	(Bq)	(#)	(kBq)
1	4	2.3%	-14000	0	-241	4000	19	5.4%
2	11	6.2%	-12000	0	-206	8000	145	41.4%
3	26	14.7%	-10000	1	-172	12000	56	16.0%
4	35	19.8%	-8000	0	-137	16000	27	7.7%
5	44	24.9%	-6000	3	-103	20000	19	5.4%
6	25	14.1%	-4000	2	-69	24000	17	4.9%
7	25	14.1%	-2000	7	-34	28000	11	3.1%
8	7	4.0%	0	48	0	32000	9	2.6%
TOTAL	177		2000	142	34	36000	6	1.7%
			4000	250	69	40000	4	1.1%
2-GATE SORTS	173		6000	291	103	44000	7	2.0%
DETECTR	SORTS	FREQX	8000	219	137	48000	1	0.3%
8			10000	130	172	52000	6	1.7%
9	5	2.9%	12000	40	206	56000	2	0.6%
10	22	12.7%	14000	16	241	60000	1	0.3%
11	28	16.2%	16000	2	275	64000	1	0.3%
12	43	24.9%	18000	2	309	68000	4	1.1%
13	35	20.2%	20000	1	344	72000	0	0.0%
14	25	14.5%	22000	0	378	76000	1	0.3%
15	15	8.7%	24000	0	412	80000	1	0.3%
TOTAL	173		26000	0	447	84000	1	0.3%
			>28000	0	0	>84000	12	3.4%
			TOTAL	1154		TOTAL	350	

SUMMARY TOTALS

HOT PARTICLE EVENTS	352
MULTIPARTICLE EVENTS	169
DISTRIBUTED EVENTS	245

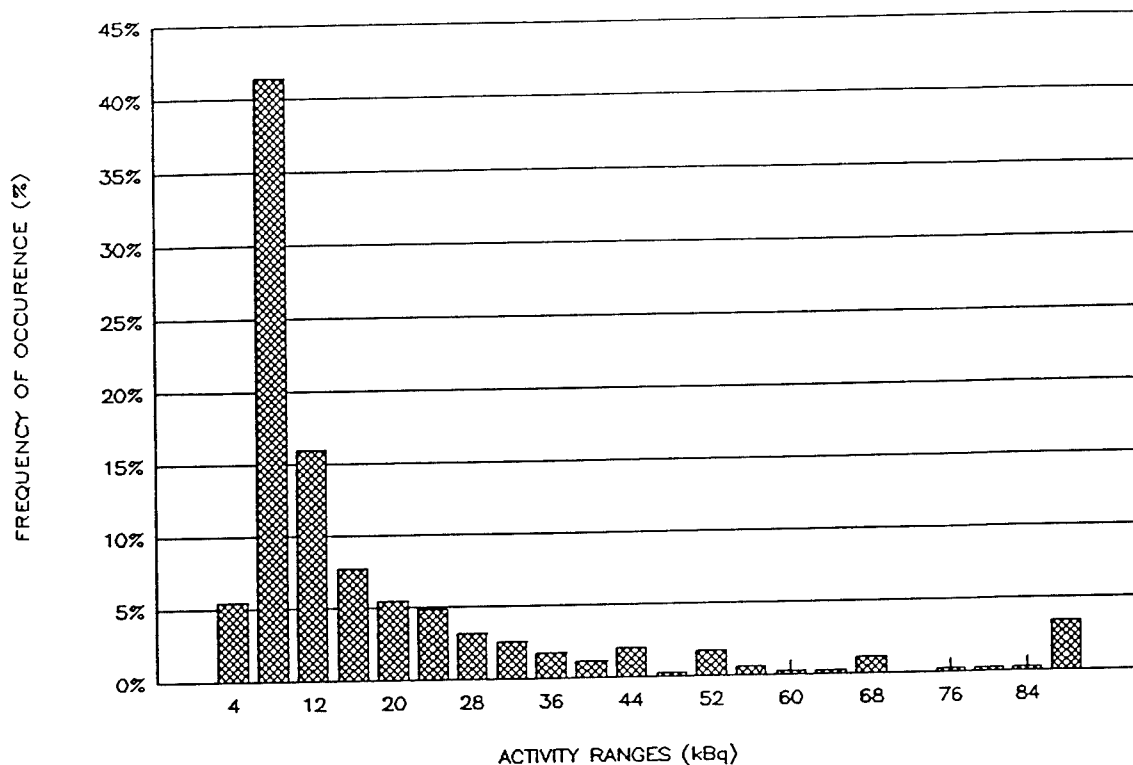
SORTS BY ONE GATE ONLY	177
SORTS BY TWO GATES	173

REC CODE EXPLANATION

1.00 Source check (Soil on belt)
 2.00 Empty belt
 3.00 Test (No process soil)

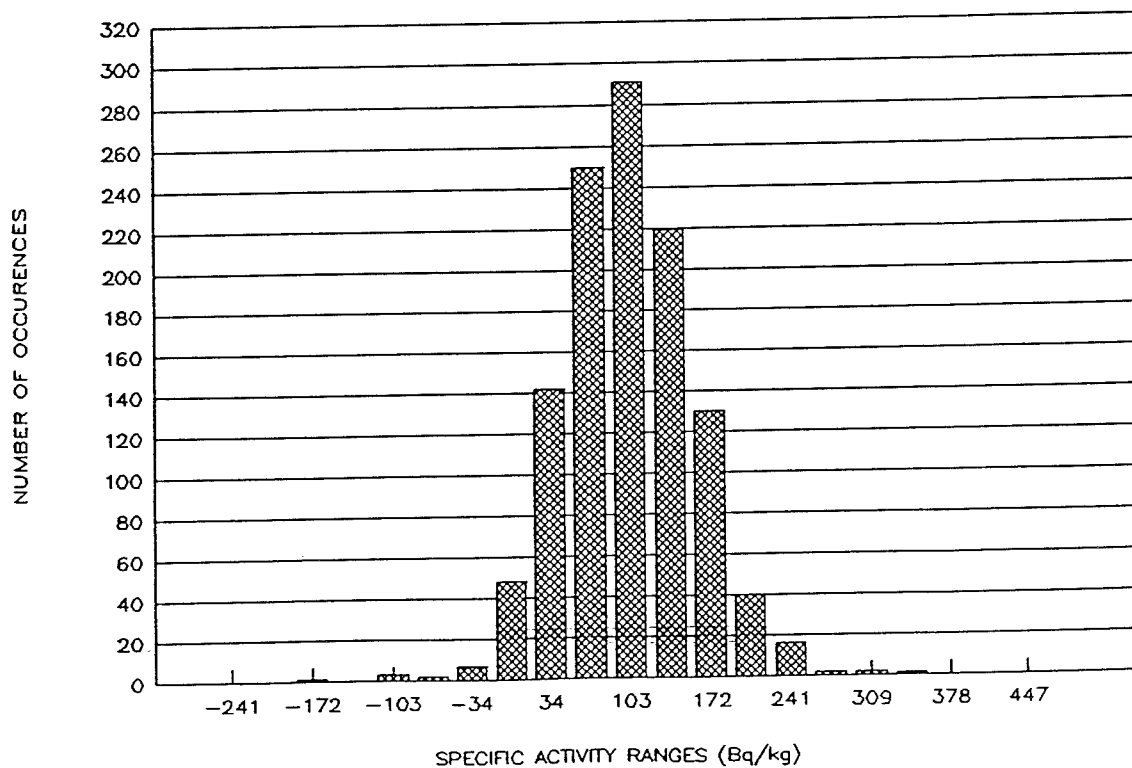
JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 19-Jul-93



CLEAN SOIL SPECIFIC ACTIVITY

SORTER 1 LOG DATA FOR 19-Jul-93



JA SOIL CLEANUP PLANT LOG SUMMARY

SORTER 2 19-Jul-93

AVERAGE BACKGROUND COUNT RATE	0.79 ± 0.03 c/sec		
SORTER SOIL DENSITY	1.3 tons/m ³		
GROUND SOIL DENSITY	1.65 tons/m ³		
		CONTAMINATED	CLEAN
MASS TOTAL		0.50 tons	66.7 tons
MAXIMUM/SORT		61.3 kg	58.3 kg
MINIMUM/SORT		0.7 kg	53.2 kg
WEIGHT RECOVERY OR VOLUME RECOVERY			99.3%
EQUIVALENT SOIL-IN-GROUND	0.40 yd ³	52.8 yd ³	53.2 yd ³ /day
PARTICLE ACTIVITY (MAXIMUM ESTIMATE)			
TOTAL	6,836 kBq		
MAXIMUM/SORT	556 kBq		
MINIMUM/SORT	3.0 kBq		
DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY	2,457 kBq	2,792 kBq	
MAXIMUM/SORT	392 kBq	19 kBq	
MINIMUM/SORT	-218 Bq	-7 kBq	
SPECIFIC ACTIVITY	4,927 Bq/kg	42 Bq/kg	

WORK HISTORY

WORK DAY START	05:00 AM	WORK DAY END	03:30 PM
PLANT START-UP	05:00 AM	PLANT SHUT-DOWN	03:30 PM
START SOIL PROCESSING	05:53 AM	END SOIL PROCESSING	03:17 PM
LUNCH START	11:30 AM	LUNCH PERIOD	0.5 hr

WORK HOURS	10.0 hr
AVAILABLE HOURS	10.0 hr
ACTUAL PROCESS HOURS (total 20-sec records)	6.40 hr
DOWN-TIME	3.60 hr
TOTAL SYSTEM PAUSE	3.03 hr
NONAVAILABLE HOURS	0.0 hr
START-UP	0.89 hr
SHUT-DOWN	0.20 hr
PLANT PERFORMANCE	64.0%
PRODUCTIVITY	64.0%

TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)

1,489

NONPROCESS RECORDS (Test, calibration, etc)

2

20-SEC PROCESS RECORDS

1,152

TOTAL SORT

2 MD>0 & MND=0

NO SORT

901 AD=0 & MD=0 & MND>0

SOME SORT

249 AD>0&0<MD<MNDmax&MND<MNDmax

UNEXPLAINED RECORDS

0

0<AD<1kBq & MD>0

0

UNEXPLAIN

PAUSE

AD=0 & MD

0

TIME

TIME

AD<0 & MD

1

12:28:50

06:54

ACT_P <5 kBq

46

13.6%

14:38:11

11:21

JA SOIL CLEANUP PLANT LOG SUMMARY

2-SEC COUNT PERIODS

11,520

12:49

2-SEC RECORDS WITH SORTS

337 (ACT_P >0 kBq)

2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR

2 DETECTORS	79	88.8%
3 DETECTORS	10	11.2%
4 DETECTORS	0	0.0%
5 DETECTORS	0	0.0%
6 DETECTORS	0	0.0%
7 DETECTORS	0	0.0%
8 DETECTORS	0	0.0%

TOTAL 89

NET 2-SEC RECORDS WITH SORTS

248

2-SEC PERIODS WITH NO SORTS

11,272

AVG TIME BETWEEN 2-SEC SORTS

92.9 sec

1-GATE SORTS	173	ACT_NO	NUMBER	SPEC_A	ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)	(kBq)
1	10	5.8%	-14000	0	-240	4000	15	4.5%
2	31	17.9%	-12000	0	-206	8000	147	43.6%
3	28	16.2%	-10000	0	-172	12000	62	18.4%
4	30	17.3%	-8000	0	-137	16000	31	9.2%
5	31	17.9%	-6000	5	-103	20000	10	3.0%
6	23	13.3%	-4000	19	-69	24000	11	3.3%
7	18	10.4%	-2000	65	-34	28000	11	3.3%
8	2	1.2%	0	197	0	32000	4	1.2%
TOTAL	173		2000	292	34	36000	7	2.1%
			4000	235	69	40000	3	0.9%
2-GATE SORTS	164	6000	165	103	44000	3	0.9%	44
DETECTR	SORTS	FREQ%	8000	101	137	48000	1	0.3%
8			10000	49	172	52000	3	0.9%
9	21	12.8%	12000	17	206	56000	4	1.2%
10	27	16.5%	14000	5	240	60000	2	0.6%
11	27	16.5%	16000	1	274	64000	0	0.0%
12	28	17.1%	18000	1	309	68000	3	0.9%
13	29	17.7%	20000	2	343	72000	4	1.2%
14	23	14.0%	22000	0	377	76000	1	0.3%
15	9	5.5%	24000	0	412	80000	1	0.3%
TOTAL	164		26000	0	446	84000	2	0.6%
			>28000	0	0	>84000	12	3.6%
			TOTAL	1154		TOTAL	337	

SUMMARY TOTALS

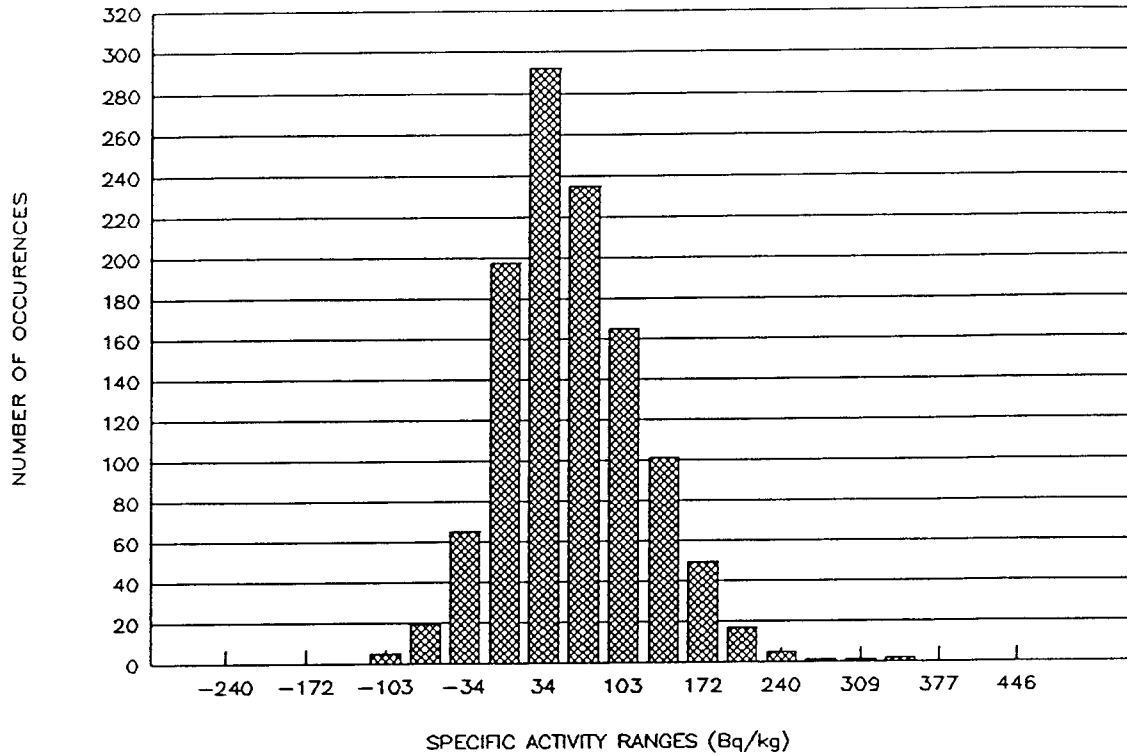
HOT PARTICLE EVENTS	342	SORTS BY ONE GATE ONLY	173
MULTIPARTICLE EVENTS	174	SORTS BY TWO GATES	164
DISTRIBUTED EVENTS	168		

REC CODE EXPLANATION

1.00 Source check (Soil on belt)
 2.00 Empty belt
 3.00 Test (No process soil)

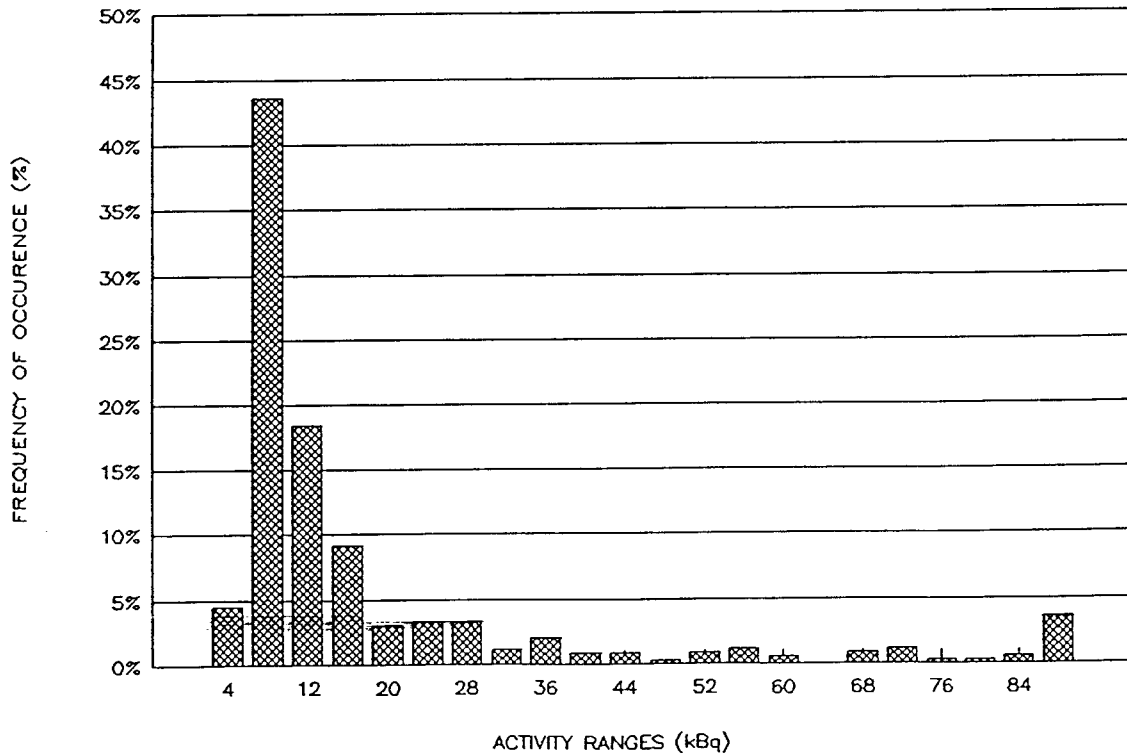
CLEAN SOIL SPECIFIC ACTIVITY

SORTER 2 LOG DATA FOR 19-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 19-Jul-93



JA SOIL CLEANUP PLANT LOG SUMMARY

SORTER 1 20-Jul-93

AVERAGE BACKGROUND COUNT RATE 0.73 ± 0.04 c/sec
 SORTER SOIL DENSITY 1.3 tons/m³
 GROUND SOIL DENSITY 1.65 tons/m³

	CONTAMINATED	CLEAN
MASS TOTAL	0.36 tons	80.2 tons
MAXIMUM/SORT	61.1 kg	58.2 kg
MINIMUM/SORT	0.7 kg	53.9 kg

WEIGHT RECOVERY OR VOLUME RECOVERY		99.5%
EQUIVALENT SOIL-IN-GROUND	0.29 yd ³	63.6 yd ³ 63.9 yd ³ /day

PARTICLE ACTIVITY (MAXIMUM ESTIMATE)

TOTAL	7,012 kBq
MAXIMUM/SORT	646 kBq
MINIMUM/SORT	2.9 kBq

DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY	2,391 kBq	6,049 kBq
MAXIMUM/SORT	385 kBq	17 kBq
MINIMUM/SORT	0 Bq	-11 kBq
SPECIFIC ACTIVITY	6,576 Bq/kg	75 Bq/kg

WORK HISTORY

WORK DAY START	05:00 AM	WORK DAY END	03:30 PM
PLANT START-UP	05:00 AM	PLANT SHUT-DOWN	03:30 PM
START SOIL PROCESSING	05:43 AM	END SOIL PROCESSING	03:06 PM
LUNCH START	11:30 AM	LUNCH PERIOD	0.5 hr

WORK HOURS	10.0 hr
AVAILABLE HOURS	10.0 hr
ACTUAL PROCESS HOURS (total 20-sec records)	7.69 hr
DOWN-TIME	2.31 hr
TOTAL SYSTEM PAUSE	1.73 hr
NONAVAILABLE HOURS	0.0 hr
START-UP	0.72 hr
SHUT-DOWN	0.38 hr
PLANT PERFORMANCE	76.9%
PRODUCTIVITY	76.9%

TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)	1,666
NONPROCESS RECORDS (Test, calibration, etc)	3

20-SEC PROCESS RECORDS	1,384		
TOTAL SORT	1 MD>0 & MND=0		
NO SORT	1,177 AD=0 & MD=0 & MND>0		
SOME SORT	206 AD>0&0<MD<MNDmax&MND<MNDmax		
UNEXPLAINED RECORDS	0		
0<AD<1kBq & MD>0	1	UNEXPLAIN	PAUSE
AD=0 & MD	1	TIME	TIME
AD<0 & MD	0	08:06:43	06:24
ACT_P <5 kBq	51 18.1%	12:21:35	09:09

JA SOIL CLEANUP PLANT LOG SUMMARY

11:02

2-SEC COUNT PERIODS 13,840

2-SEC RECORDS WITH SORTS 282 (ACT_P >0 kBq)

2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR

2 DETECTORS	63	88.7%
3 DETECTORS	8	11.3%
4 DETECTORS	0	0.0%
5 DETECTORS	0	0.0%
6 DETECTORS	0	0.0%
7 DETECTORS	0	0.0%
8 DETECTORS	0	0.0%
TOTAL	71	

NET 2-SEC RECORDS WITH SORTS 211

2-SEC PERIODS WITH NO SORTS 13,629

AVG TIME BETWEEN 2-SEC SORTS 131.2 sec

1-GATE SORTS DETECTR	SORTS	139 FREQ%	ACT_ND (Bq)	NUMBER (#)	SPEC_A (Bq/kg)	ACT_P (Bq)	SORT FREQ% (#)	ACT_P (kBq)
1	2	1.4%	-14000	0	-241	4000	12 4.3%	4
2	8	5.8%	-12000	0	-206	8000	110 39.0%	8
3	17	12.2%	-10000	4	-172	12000	47 16.7%	12
4	24	17.3%	-8000	3	-137	16000	27 9.6%	16
5	38	27.3%	-6000	4	-103	20000	19 6.7%	20
6	22	15.8%	-4000	7	-69	24000	8 2.8%	24
7	19	13.7%	-2000	21	-34	28000	7 2.5%	28
8	9	6.5%	0	74	0	32000	8 2.8%	32
TOTAL	139		2000	189	34	36000	6 2.1%	36
			4000	362	69	40000	3 1.1%	40
2-GATE SORTS		143	6000	331	103	44000	7 2.5%	44
DETECTR	SORTS	FREQ%	8000	237	137	48000	3 1.1%	48
8			10000	92	172	52000	2 0.7%	52
9	4	2.8%	12000	35	206	56000	4 1.4%	56
10	9	6.3%	14000	22	241	60000	0 0.0%	60
11	23	16.1%	16000	3	275	64000	2 0.7%	64
12	38	26.6%	18000	3	309	68000	2 0.7%	68
13	30	21.0%	20000	0	344	72000	1 0.4%	72
14	22	15.4%	22000	0	378	76000	2 0.7%	76
15	17	11.9%	24000	0	412	80000	0 0.0%	80
TOTAL	143		26000	0	447	84000	0 0.0%	84
			>28000	0	0	>84000	12 4.3%	>84
			TOTAL	1387		TOTAL	282	
SUMMARY TOTALS								
	HOT PARTICLE EVENTS	282				SORTS BY ONE GATE ONLY	139	
	MULTIPARTICLE EVENTS	133				SORTS BY TWO GATES	143	
	DISTRIBUTED EVENTS	83						

REC CODE EXPLANATION

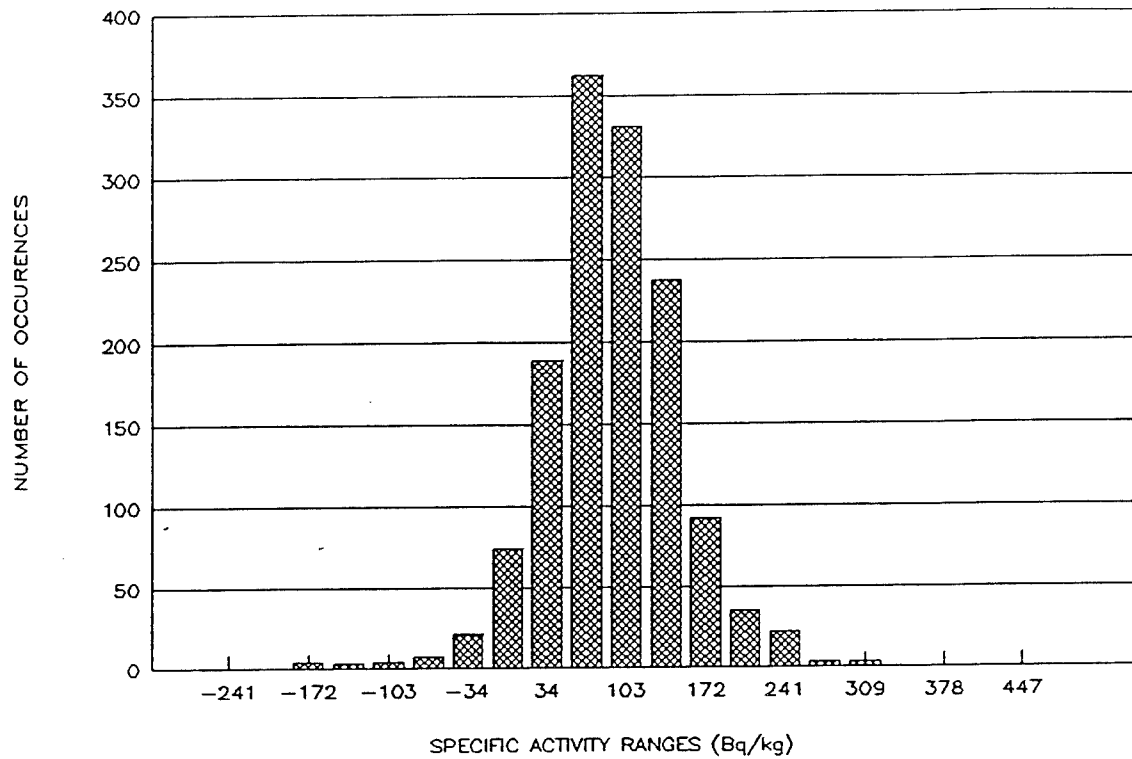
1.00 Source check (Soil on belt)

2.00 Empty belt

3.00 Test (No process soil)

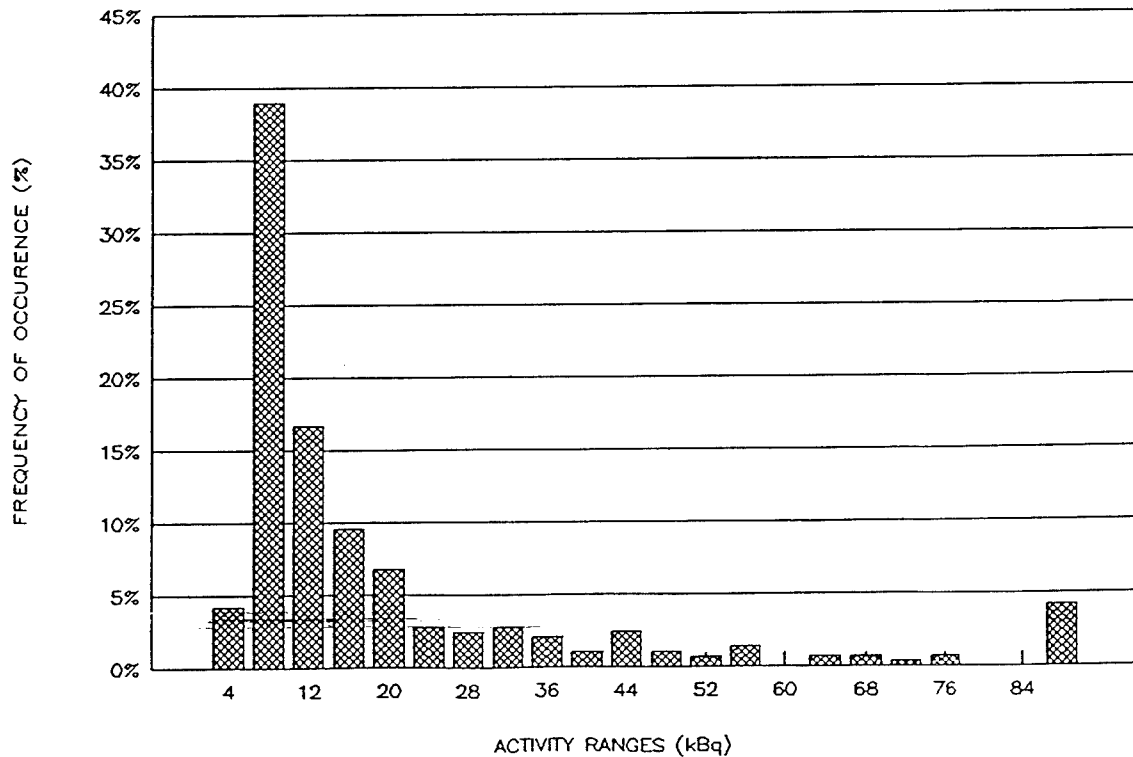
CLEAN SOIL SPECIFIC ACTIVITY

SORTER 1 LOG DATA FOR 20-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 20-Jul-93



JA SOIL CLEANUP PLANT LOG SUMMARY

SORTER 2 20-Jul-93

AVERAGE BACKGROUND COUNT RATE	0.79 ± 0.03 c/sec		
SORTER SOIL DENSITY	1.3 tons/m ³		
GROUND SOIL DENSITY	1.65 tons/m ³		
	CONTAMINATED	CLEAN	
MASS TOTAL	0.49 tons	79.0 tons	
MAXIMUM/SORT	61.3 kg	58.3 kg	
MINIMUM/SORT	0.7 kg	53.2 kg	
WEIGHT RECOVERY OR VOLUME RECOVERY			99.4%
EQUIVALENT SOIL-IN-GROUND	0.39 yd ³	62.6 yd ³	63.0 yd ³ /day
PARTICLE ACTIVITY (MAXIMUM ESTIMATE)			
TOTAL	7,655 kBq		
MAXIMUM/SORT	1,032 kBq		
MINIMUM/SORT	3.3 kBq		
DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY	2,659 kBq	2,262 kBq	
MAXIMUM/SORT	606 kBq	15 kBq	
MINIMUM/SORT	-1433 Bq	-17 kBq	
SPECIFIC ACTIVITY	5,375 Bq/kg	29 Bq/kg	
WORK HISTORY			
WORK DAY START	05:00 AM	WORK DAY END	03:30 PM
PLANT START-UP	05:00 AM	PLANT SHUT-DOWN	03:30 PM
START SOIL PROCESSING	05:43 AM	END SOIL PROCESSING	03:03 PM
LUNCH START	11:30 AM	LUNCH PERIOD	0.5 hr
WORK HOURS	10.0 hr		
AVAILABLE HOURS	10.0 hr		
ACTUAL PROCESS HOURS (total 20-sec records)	7.58 hr		
DOWN-TIME	2.42 hr		
TOTAL SYSTEM PAUSE	1.80 hr		
NONAVAILABLE HOURS	0.0 hr		
START-UP	0.72 hr		
SHUT-DOWN	0.44 hr		
PLANT PERFORMANCE	75.8%		
PRODUCTIVITY	75.8%		
TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)	1,707		
NONPROCESS RECORDS (Test, calibration, etc)	13		
20-SEC PROCESS RECORDS	1,364		
TOTAL SORT	2 MD>0 & MND=0		
NO SORT	1,113 AD=0 & MD=0 & MND>0		
SOME SORT	249 AD>0&0<MD<MNDmax&MND<MNDmax		
UNEXPLAINED RECORDS	0		
0<AD<1kBq & MD>0	2	UNEXPLAIN	PAUSE
AD=0 & MD	1	TIME	TIME
AD<0 & MD	1	08:09:44	06:24
ACT_P <5 kBq	42 12.2%	10:54:14	09:09

JA SOIL CLEANUP PLANT LOG SUMMARY

2-SEC COUNT PERIODS	13,640	12:21:36	10:50
2-SEC RECORDS WITH SORTS	343 (ACT_P >0 kBq)	14:10:56	10:54
2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR			11:02
2 DETECTORS	80 83.3%		
3 DETECTORS	15 15.6%		
4 DETECTORS	1 1.0%		
5 DETECTORS	0 0.0%		
6 DETECTORS	0 0.0%		
7 DETECTORS	0 0.0%		
8 DETECTORS	0 0.0%		
TOTAL	96		
NET 2-SEC RECORDS WITH SORTS	247		
2-SEC PERIODS WITH NO SORTS	13,393		
AVG TIME BETWEEN 2-SEC SORTS	110.4 sec		

1-GATE SORTS	178	ACT_NO	NUMBER	SPEC_A	ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)	(kBq)
1	12	6.7%	-14000	2	-240	4000	10	2.9%
2	26	14.6%	-12000	3	-206	8000	140	40.8%
3	21	11.8%	-10000	6	-172	12000	64	18.7%
4	29	16.3%	-8000	10	-137	16000	38	11.1%
5	39	21.9%	-6000	11	-103	20000	15	4.4%
6	35	19.7%	-4000	31	-69	24000	14	4.1%
7	13	7.3%	-2000	116	-34	28000	10	2.9%
8	3	1.7%	0	249	0	32000	6	1.7%
TOTAL	178		2000	331	34	36000	5	1.5%
			4000	300	69	40000	2	0.6%
2-GATE SORTS	165		6000	197	103	44000	4	1.2%
DETECTR	SORTS	FREQ%	8000	82	137	48000	3	0.9%
8			10000	21	172	52000	4	1.2%
9	20	12.1%	12000	14	206	56000	3	0.9%
10	20	12.1%	14000	2	240	60000	4	1.2%
11	20	12.1%	16000	2	274	64000	5	1.5%
12	33	20.0%	18000	0	309	68000	3	0.9%
13	40	24.2%	20000	0	343	72000	0	0.0%
14	22	13.3%	22000	0	377	76000	0	0.0%
15	10	6.1%	24000	0	412	80000	2	0.6%
TOTAL	165		26000	0	446	84000	1	0.3%
			>28000	0	0	>84000	10	2.9%
			TOTAL	1377		TOTAL	343	

SUMMARY TOTALS

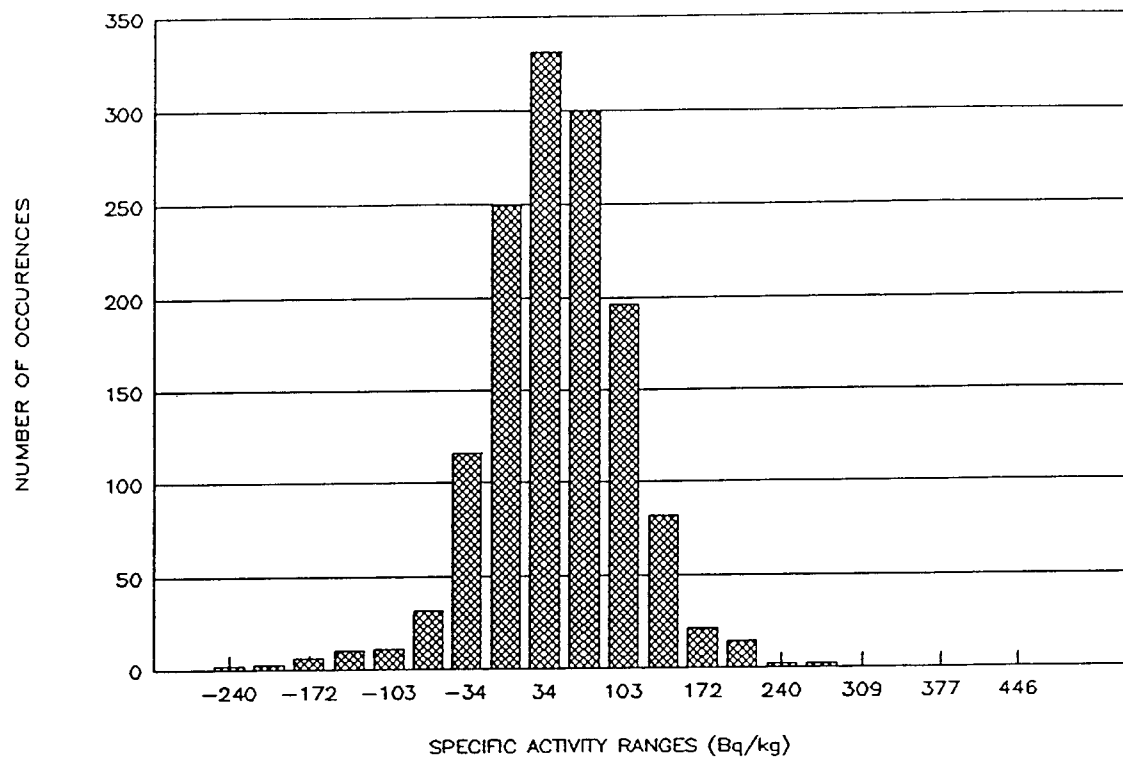
HOT PARTICLE EVENTS	332	SORTS BY ONE GATE ONLY	178
MULTIPARTICLE EVENTS	178	SORTS BY TWO GATES	165
DISTRIBUTED EVENTS	168		

REC CODE EXPLANATION

1.00 Source check (Soil on belt)
 2.00 Empty belt
 3.00 Test (No process soil)

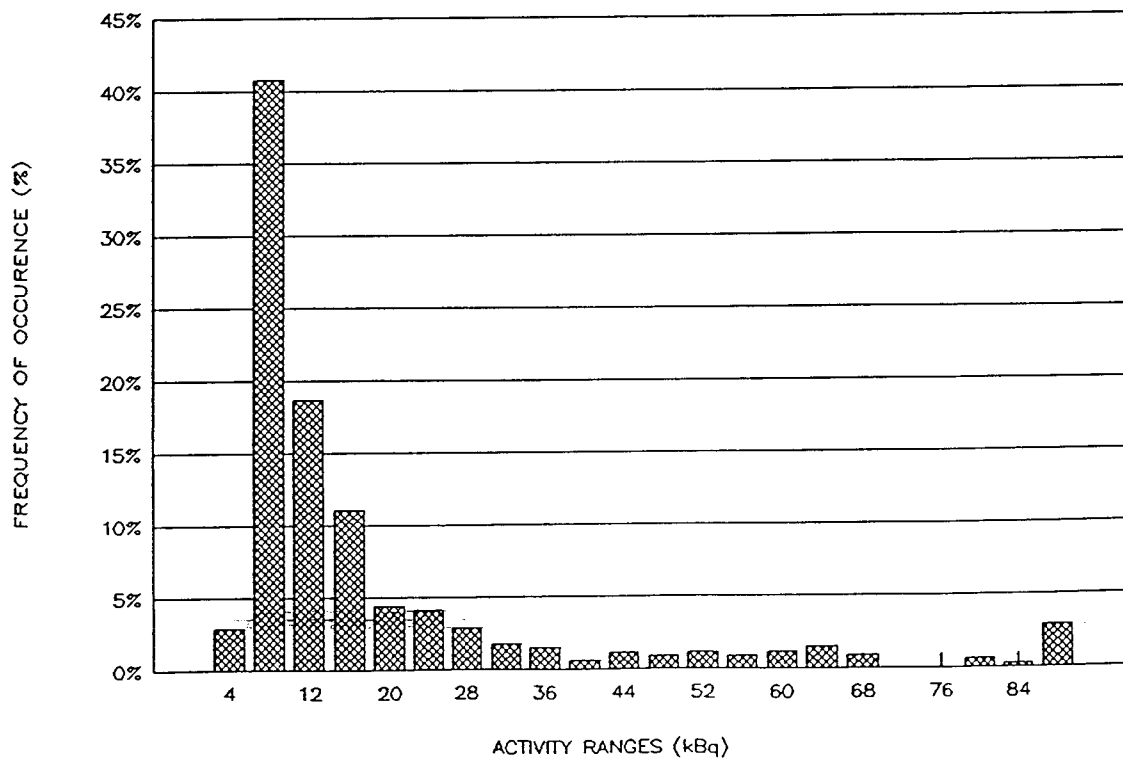
CLEAN SOIL SPECIFIC ACTIVITY

SORTER 2 LOG DATA FOR 20-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 20-Jul-93



JA SOIL CLEANUP PLANT LOG SUMMARY

SORTER 1 21-Jul-93

AVERAGE BACKGROUND COUNT RATE 0.72 ± 0.04 c/sec
 SORTER SOIL DENSITY 1.3 tons/m³
 GROUND SOIL DENSITY 1.65 tons/m³

	CONTAMINATED	CLEAN
MASS TOTAL	0.63 tons	83.7 tons
MAXIMUM/SORT	61.1 kg	58.2 kg
MINIMUM/SORT	0.7 kg	51.7 kg

WEIGHT RECOVERY OR VOLUME RECOVERY		99.3%
EQUIVALENT SOIL-IN-GROUND	0.50 yd ³	66.4 yd ³ 66.9 yd ³ /day

PARTICLE ACTIVITY (MAXIMUM ESTIMATE)

TOTAL	15,098 kBq
MAXIMUM/SORT	3,577 kBq
MINIMUM/SORT	2.4 kBq

DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY

	5,152 kBq	3,603 kBq
MAXIMUM/SORT	2080 kBq	21 kBq
MINIMUM/SORT	0 Bq	-7 kBq
SPECIFIC ACTIVITY	8,213 Bq/kg	43 Bq/kg

WORK HISTORY

WORK DAY START	05:00 AM
PLANT START-UP	05:00 AM
START SOIL PROCESSING	05:24 AM
LUNCH START	11:30 AM

WORK DAY END	03:30 PM
PLANT SHUT-DOWN	03:30 PM
END SOIL PROCESSING	03:04 PM
LUNCH PERIOD	0.5 hr

WORK HOURS	10.0 hr
AVAILABLE HOURS	10.0 hr
ACTUAL PROCESS HOURS (total 20-sec records)	8.05 hr
DOWN-TIME	1.95 hr
TOTAL SYSTEM PAUSE	1.60 hr
NONAVAILABLE HOURS	0.0 hr
START-UP	0.41 hr
SHUT-DOWN	0.43 hr
PLANT PERFORMANCE	80.5%
PRODUCTIVITY	80.5%

TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 2,011

NONPROCESS RECORDS (Test, calibration, etc) 13

20-SEC PROCESS RECORDS

TOTAL SORT	1,449
NO SORT	1 MD>0 & MND=0
SOME SORT	1,112 AD=0 & MD=0 & MND>0
UNEXPLAINED RECORDS	336 AD>0&0<MD<MNDmax&MND<MNDmax
	0

		UNEXPLAIN	PAUSE
		TIME	TIME
0<AD<1kBq & MD>0	1	11:01:15	05:31
AD=0 & MD	0		
AD<0 & MD	0		
ACT_P <5 kBq	111 19.8%		05:33

JA SOIL CLEANUP PLANT LOG SUMMARY

11:23

2-SEC COUNT PERIODS 14,490

2-SEC RECORDS WITH SORTS 562 (ACT_P >0 kBq)

2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR

2 DETECTORS	126	76.8%
3 DETECTORS	31	18.9%
4 DETECTORS	5	3.0%
5 DETECTORS	2	1.2%
6 DETECTORS	0	0.0%
7 DETECTORS	0	0.0%
8 DETECTORS	0	0.0%
TOTAL	164	

NET 2-SEC RECORDS WITH SORTS 398

2-SEC PERIODS WITH NO SORTS 14,092

AVG TIME BETWEEN 2-SEC SORTS 72.8 sec

1-GATE SORTS DETECTR	SORTS	291 FREQ%	ACT_ND (Bq)	NUMBER (#)	SPEC_A (Bq/kg)	ACT_P (Bq)	SORT FREQ% (#)	ACT_P (kBq)
1	1	0.3%	-14000	0	-241	4000	30 5.3%	4
2	15	5.2%	-12000	0	-206	8000	247 44.0%	8
3	30	10.3%	-10000	1	-172	12000	106 18.9%	12
4	54	18.6%	-8000	5	-137	16000	27 4.8%	16
5	63	21.6%	-6000	3	-103	20000	32 5.7%	20
6	50	17.2%	-4000	31	-69	24000	18 3.2%	24
7	56	19.2%	-2000	94	-34	28000	16 2.8%	28
8	22	7.6%	0	213	0	32000	8 1.4%	32
TOTAL	291		2000	360	34	36000	13 2.3%	36
			4000	336	69	40000	9 1.6%	40
			6000	200	103	44000	5 0.9%	44
2-GATE SORTS DETECTR	SORTS	271 FREQ%	8000	122	137	48000	4 0.7%	48
8			10000	53	172	52000	9 1.6%	52
9	6	2.2%	12000	23	206	56000	7 1.2%	56
10	19	7.0%	14000	14	241	60000	3 0.5%	60
11	44	16.2%	16000	4	275	64000	6 1.1%	64
12	48	17.7%	18000	2	309	68000	3 0.5%	68
13	61	22.5%	20000	0	344	72000	2 0.4%	72
14	50	18.5%	22000	1	378	76000	4 0.7%	76
15	43	15.9%	24000	0	412	80000	1 0.2%	80
TOTAL	271		26000	0	447	84000	0 0.0%	84
			>28000	0	0	>84000	12 2.1%	>84
			TOTAL	1462		TOTAL	562	

SUMMARY TOTALS

HOT PARTICLE EVENTS	536	SORTS BY ONE GATE ONLY	291
MULTIPARTICLE EVENTS	239	SORTS BY TWO GATES	271
DISTRIBUTED EVENTS	83		

REC CODE EXPLANATION

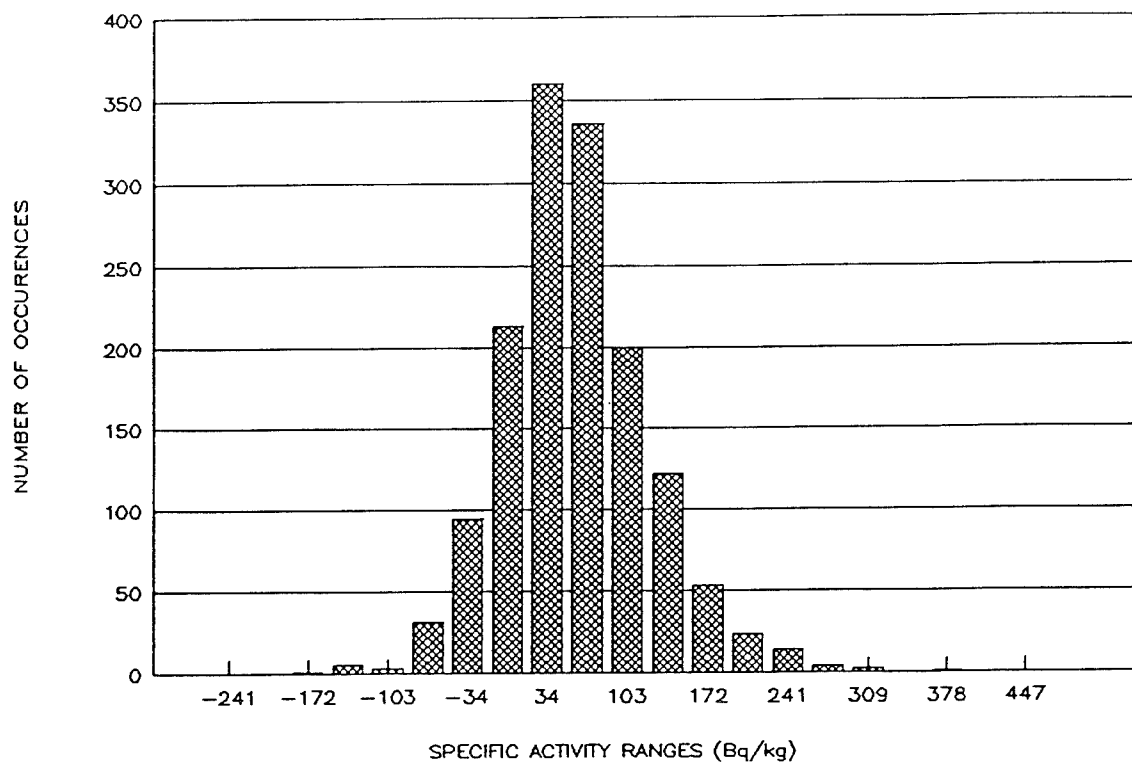
1.00 Source check (Soil on belt)

2.00 Empty belt

3.00 Test (No process soil)

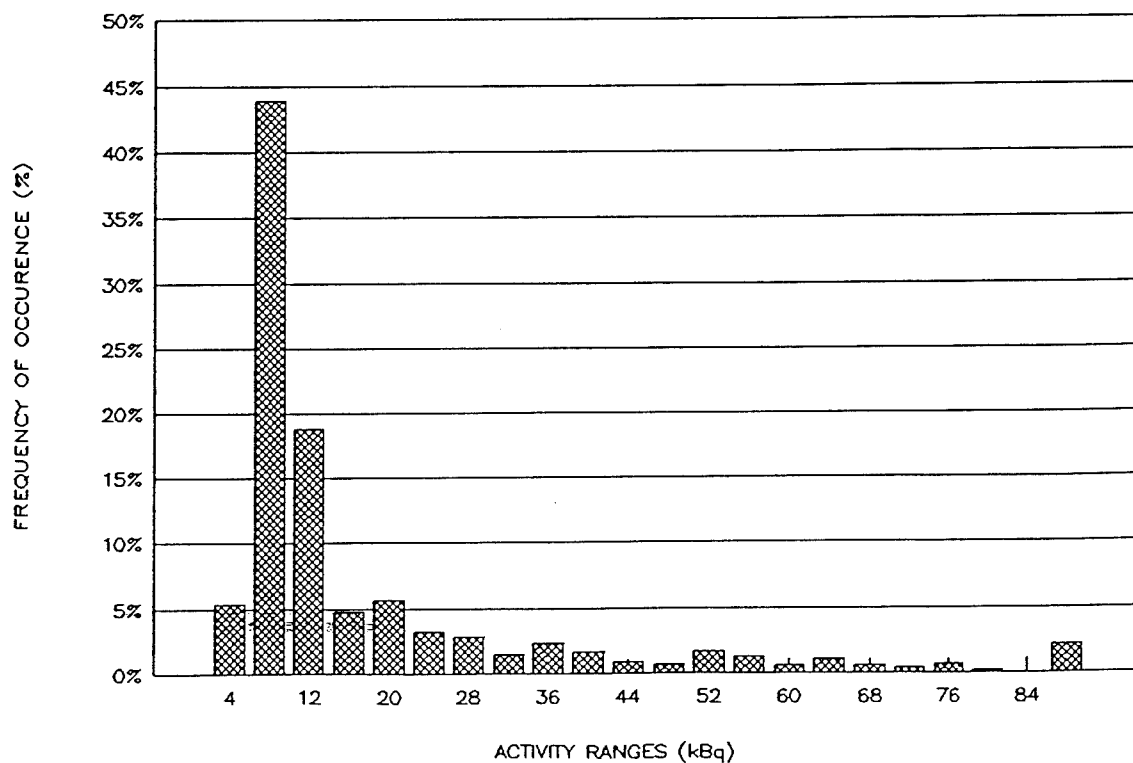
CLEAN SOIL SPECIFIC ACTIVITY

SORTER 1 LOG DATA FOR 21-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 21-Jul-93



JA SOIL CLEANUP PLANT LOG SUMMARY

SORTER 2 21-Jul-93

AVERAGE BACKGROUND COUNT RATE 0.78 ± 0.03 c/sec
 SORTER SOIL DENSITY 1.3 tons/m³
 GROUND SOIL DENSITY 1.65 tons/m³

	CONTAMINATED	CLEAN
MASS TOTAL	0.77 tons	83.3 tons
MAXIMUM/SORT	61.3 kg	58.3 kg
MINIMUM/SORT	0.7 kg	48.8 kg

WEIGHT RECOVERY OR VOLUME RECOVERY 99.1%
 EQUIVALENT SOIL-IN-GROUND 0.61 yd³ 66.0 yd³ 66.6 yd³/day

PARTICLE ACTIVITY (MAXIMUM ESTIMATE)
 TOTAL 12,455 kBq
 MAXIMUM/SORT 499 kBq
 MINIMUM/SORT 2.4 kBq

	4,396 kBq	4,406 kBq
DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY		
MAXIMUM/SORT	230 kBq	19 kBq
MINIMUM/SORT	-471 Bq	-12 kBq
SPECIFIC ACTIVITY	5,743 Bq/kg	53 Bq/kg

WORK HISTORY

WORK DAY START 05:00 AM
 PLANT START-UP 05:00 AM
 START SOIL PROCESSING 05:24 AM
 LUNCH START 11:30 AM

WORK DAY END 03:30 PM
 PLANT SHUT-DOWN 03:30 PM
 END SOIL PROCESSING 03:04 PM
 LUNCH PERIOD 0.5 hr

WORK HOURS	10.0 hr
AVAILABLE HOURS	10.0 hr
ACTUAL PROCESS HOURS (total 20-sec records)	8.01 hr
DOWN-TIME	1.99 hr
TOTAL SYSTEM PAUSE	1.60 hr
NONAVAILABLE HOURS	0.0 hr
START-UP	0.42 hr
SHUT-DOWN	0.43 hr
PLANT PERFORMANCE	80.1%
PRODUCTIVITY	80.1%

TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 2,058
 NONPROCESS RECORDS (Test, calibration, etc) 20

20-SEC PROCESS RECORDS

TOTAL SORT	1,442	2 MD>0 & MND=0
NO SORT	1,080	AD=0 & MD=0 & MND>0
SOME SORT	360	AD>0&0<MD<MNDmax&MND<MNDmax
UNEXPLAINED RECORDS	0	
0<AD<1kBq & MD>0	2	UNEXPLAIN
AD=0 & MD	0	TIME
AD<0 & MD	1	05:33:16
ACT_P <5 kBq	119	08:50:16
	19.3%	05:33

JA SOIL CLEANUP PLANT LOG SUMMARY

2-SEC COUNT PERIODS

14,420

10:19:36

11:23

2-SEC RECORDS WITH SORTS

616 (ACT_P >0 kBq)

2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR

2 DETECTORS	141	81.5%
3 DETECTORS	30	17.3%
4 DETECTORS	2	1.2%
5 DETECTORS	0	0.0%
6 DETECTORS	0	0.0%
7 DETECTORS	0	0.0%
8 DETECTORS	0	0.0%

TOTAL 173

NET 2-SEC RECORDS WITH SORTS

443

2-SEC PERIODS WITH NO SORTS

13,977

AVG TIME BETWEEN 2-SEC SORTS

65.1 sec

1-GATE SORTS DETECTR	SORTS	316 FREQ%	ACT_NO (Bq)	NUMBER (#)	SPEC_A (Bq/kg)	ACT_P (Bq)	SORT FREQ (#)	ACT_P (kBq)
1	18	5.7%	-14000	2	-240	4000	29 4.7%	4
2	43	13.6%	-12000	4	-206	8000	265 43.0%	8
3	62	19.6%	-10000	7	-172	12000	97 15.7%	12
4	58	18.4%	-8000	7	-137	16000	61 9.9%	16
5	44	13.9%	-6000	8	-103	20000	37 6.0%	20
6	51	16.1%	-4000	25	-69	24000	24 3.9%	24
7	34	10.8%	-2000	76	-34	28000	9 1.5%	28
8	6	1.9%	0	206	0	32000	13 2.1%	32
TOTAL	316		2000	303	34	36000	12 1.9%	36
			4000	317	69	40000	9 1.5%	40
2-GATE SORTS		300	6000	221	103	44000	9 1.5%	44
DETECTR	SORTS	FREQ%	8000	138	137	48000	3 0.5%	48
8			10000	55	172	52000	4 0.6%	52
9	33	11.0%	12000	38	206	56000	2 0.3%	56
10	43	14.3%	14000	31	240	60000	5 0.8%	60
11	57	19.0%	16000	12	274	64000	3 0.5%	64
12	55	18.3%	18000	11	309	68000	6 1.0%	68
13	47	15.7%	20000	1	343	72000	0 0.0%	72
14	49	16.3%	22000	0	377	76000	2 0.3%	76
15	16	5.3%	24000	0	412	80000	1 0.2%	80
TOTAL	300		26000	0	446	84000	1 0.2%	84
			>28000	0	0	>84000	24 3.9%	>84
			TOTAL	1462		TOTAL	616	

SUMMARY TOTALS

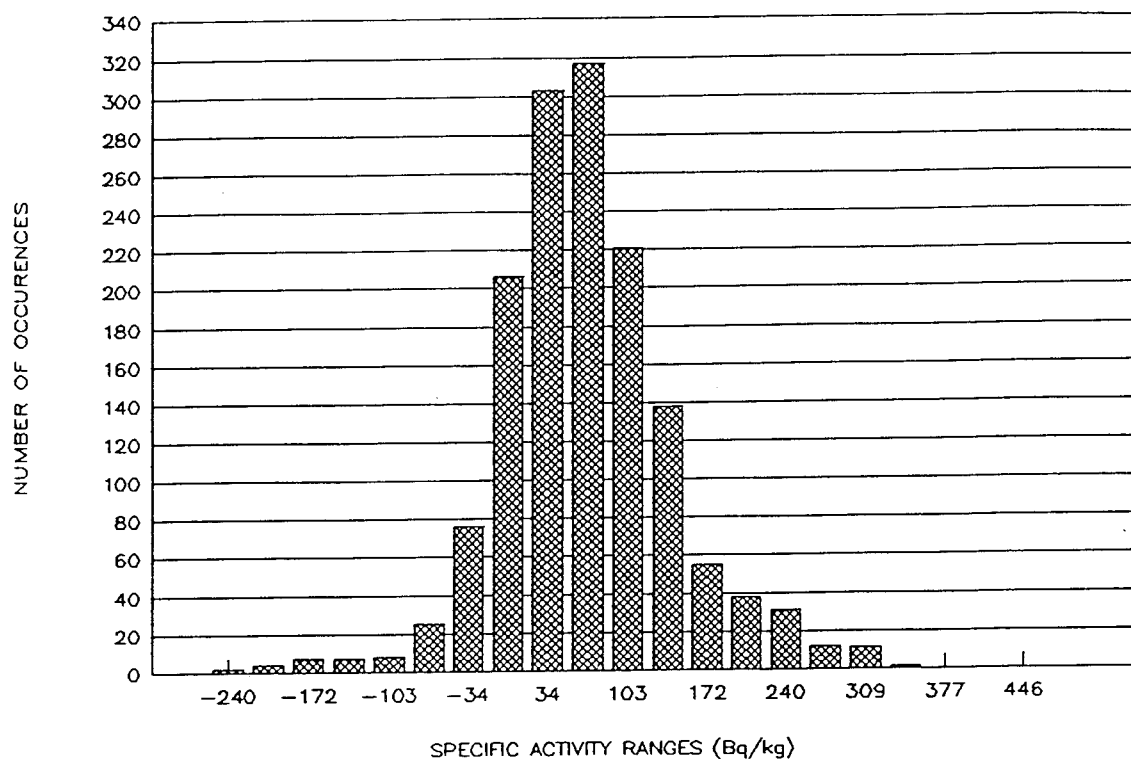
HOT PARTICLE EVENTS	603	SORTS BY ONE GATE ONLY	316
MULTIPARTICLE EVENTS	283	SORTS BY TWO GATES	300
DISTRIBUTED EVENTS	164		

REC CODE EXPLANATION

1.00 Source check (Soil on belt)
 2.00 Empty belt
 3.00 Test (No process soil)

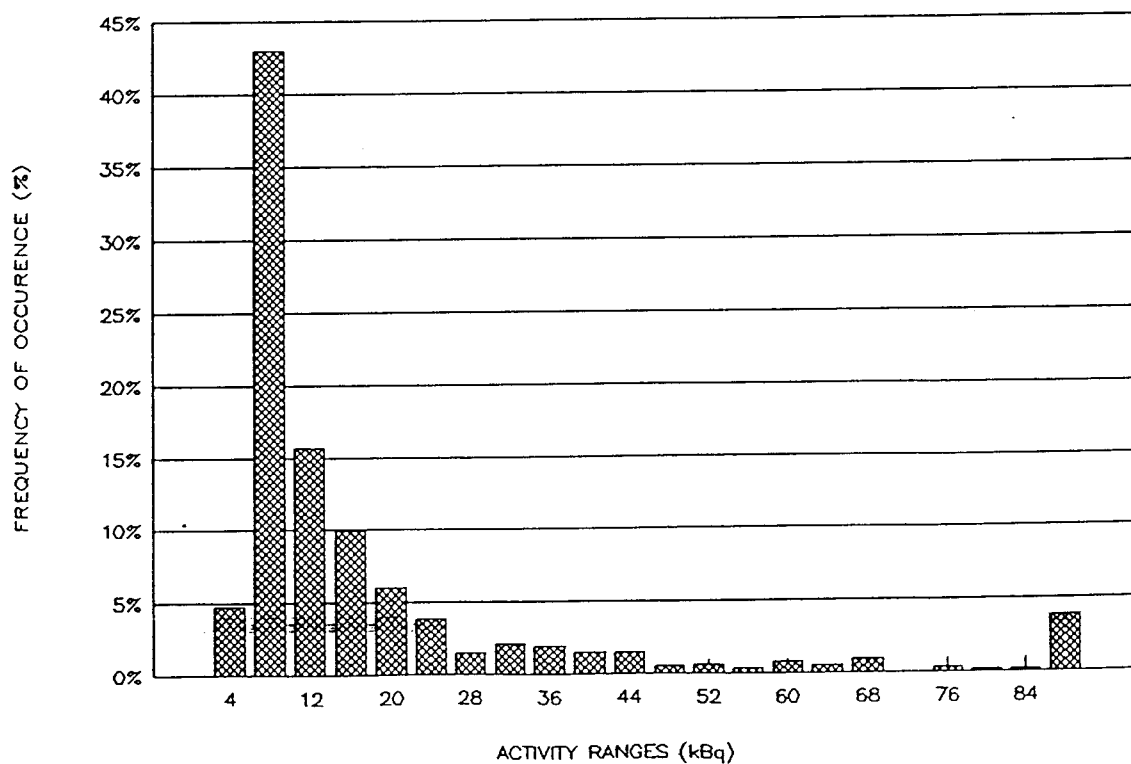
CLEAN SOIL SPECIFIC ACTIVITY

SORTER 2 LOG DATA FOR 21-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 21-Jul-93



JA SOIL CLEANUP PLANT LOG SUMMARY

SORTER 1 22-Jul-93

AVERAGE BACKGROUND COUNT RATE 0.72 ± 0.04 c/sec
 SORTER SOIL DENSITY 1.3 tons/m³
 GROUND SOIL DENSITY 1.65 tons/m³

	CONTAMINATED	CLEAN
MASS TOTAL	0.28 tons	83.4 tons
MAXIMUM/SORT	61.1 kg	58.2 kg
MINIMUM/SORT	0.7 kg	52.4 kg

		99.7%
WEIGHT RECOVERY OR VOLUME RECOVERY		
EQUIVALENT SOIL-IN-GROUND	0.22 yd ³	66.1 yd ³ 66.3 yd ³ /day

PARTICLE ACTIVITY (MAXIMUM ESTIMATE)

TOTAL	8,768 kBq
MAXIMUM/SORT	2,042 kBq
MINIMUM/SORT	3.5 kBq

DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY

	2,840 kBq	1,754 kBq
MAXIMUM/SORT	1285 kBq	14 kBq
MINIMUM/SORT	-2947 Bq	-7 kBq
SPECIFIC ACTIVITY	10,052 Bq/kg	21 Bq/kg

WORK HISTORY

WORK DAY START	05:00 AM	WORK DAY END	03:30 PM
PLANT START-UP	05:00 AM	PLANT SHUT-DOWN	03:30 PM
START SOIL PROCESSING	05:43 AM	END SOIL PROCESSING	03:03 PM
LUNCH START	11:30 AM	LUNCH PERIOD	0.5 hr

WORK HOURS	10.0 hr
AVAILABLE HOURS	10.0 hr
ACTUAL PROCESS HOURS (total 20-sec records)	7.99 hr
DOWN-TIME	2.01 hr
TOTAL SYSTEM PAUSE	1.30 hr
NONAVAILABLE HOURS	0.0 hr
START-UP	0.73 hr
SHUT-DOWN	0.45 hr
PLANT PERFORMANCE	79.9%
PRODUCTIVITY	79.9%

TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)

1,653

NONPROCESS RECORDS (Test, calibration, etc)

13

20-SEC PROCESS RECORDS

1,438

TOTAL SORT

1 MD>0 & MND=0

NO SORT

1,285 AD=0 & MD=0 & MND>0

SOME SORT

151 AD>0&0<MD<MNDmax&MND<MNDmax

UNEXPLAINED RECORDS

1

0<AD<1kBq & MD>0

0

UNEXPLAIN

PAUSE

AD=0 & MD

0

TIME

TIME

AD<0 & MD

2

12:43:13

11:24

ACT_P <5 kBq

42

19.5%

13:44:13

12:42

JA SOIL CLEANUP PLANT LOG SUMMARY

2-SEC COUNT PERIODS 14,380
 2-SEC RECORDS WITH SORTS 215 (ACT_P >0 kBq)
 2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR
 2 DETECTORS 48 73.8%
 3 DETECTORS 12 18.5%
 4 DETECTORS 3 4.6%
 5 DETECTORS 2 3.1%
 6 DETECTORS 0 0.0%
 7 DETECTORS 0 0.0%
 8 DETECTORS 0 0.0%
 TOTAL 65
 NET 2-SEC RECORDS WITH SORTS 150
 2-SEC PERIODS WITH NO SORTS 14,230
 AVG TIME BETWEEN 2-SEC SORTS 191.7 sec

1-GATE SORTS DETECTR	SORTS	104 FREQ%	ACT_NO (Bq)	NUMBER (#)	SPEC_A (Bq/kg)	ACT_P (Bq)	SORT (#)	FREQ%	ACT_P (kBq)
1	2	1.9%	-14000	3	-241	4000	8	3.7%	4
2	6	5.8%	-12000	2	-206	8000	83	38.6%	8
3	11	10.6%	-10000	2	-172	12000	28	13.0%	12
4	24	23.1%	-8000	1	-137	16000	16	7.4%	16
5	25	24.0%	-6000	6	-103	20000	12	5.6%	20
6	17	16.3%	-4000	37	-69	24000	10	4.7%	24
7	16	15.4%	-2000	141	-34	28000	3	1.4%	28
8	3	2.9%	0	312	0	32000	5	2.3%	32
TOTAL	104		2000	385	34	36000	7	3.3%	36
			4000	336	69	40000	2	0.9%	40
2-GATE SORTS		111	6000	153	103	44000	3	1.4%	44
DETECTR	SORTS	FREQ%	8000	57	137	48000	4	1.9%	48
8			10000	13	172	52000	2	0.9%	52
9	3	2.7%	12000	2	206	56000	1	0.5%	56
10	11	9.9%	14000	1	241	60000	3	1.4%	60
11	19	17.1%	16000	0	275	64000	5	2.3%	64
12	21	18.9%	18000	0	309	68000	4	1.9%	68
13	25	22.5%	20000	0	344	72000	0	0.0%	72
14	21	18.9%	22000	0	378	76000	3	1.4%	76
15	11	9.9%	24000	0	412	80000	1	0.5%	80
TOTAL	111		26000	0	447	84000	1	0.5%	84
			>28000	0	0	>84000	14	6.5%	>84
			TOTAL	1451		TOTAL	215		

SUMMARY TOTALS

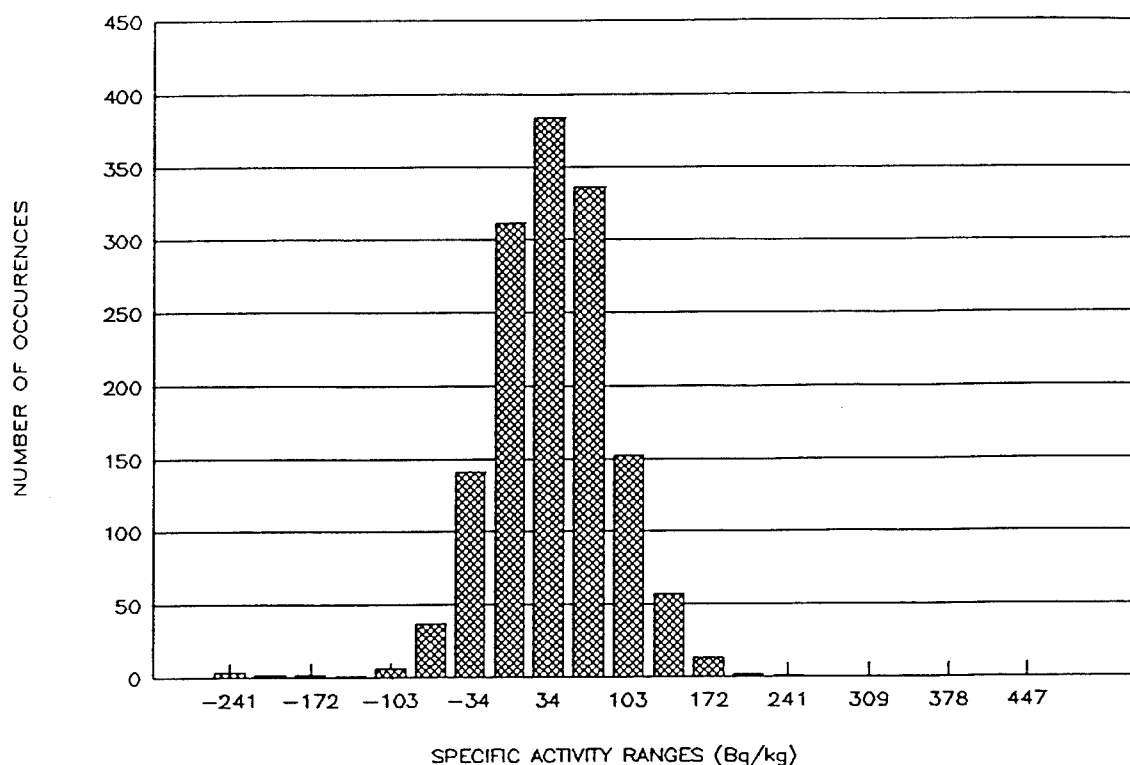
HOT PARTICLE EVENTS	219	SORTS BY ONE GATE ONLY	104
MULTIPARTICLE EVENTS	84	SORTS BY TWO GATES	111
DISTRIBUTED EVENTS	83		

REC CODE EXPLANATION

1.00 Source check (Soil on belt)
 2.00 Empty belt
 3.00 Test (No process soil)

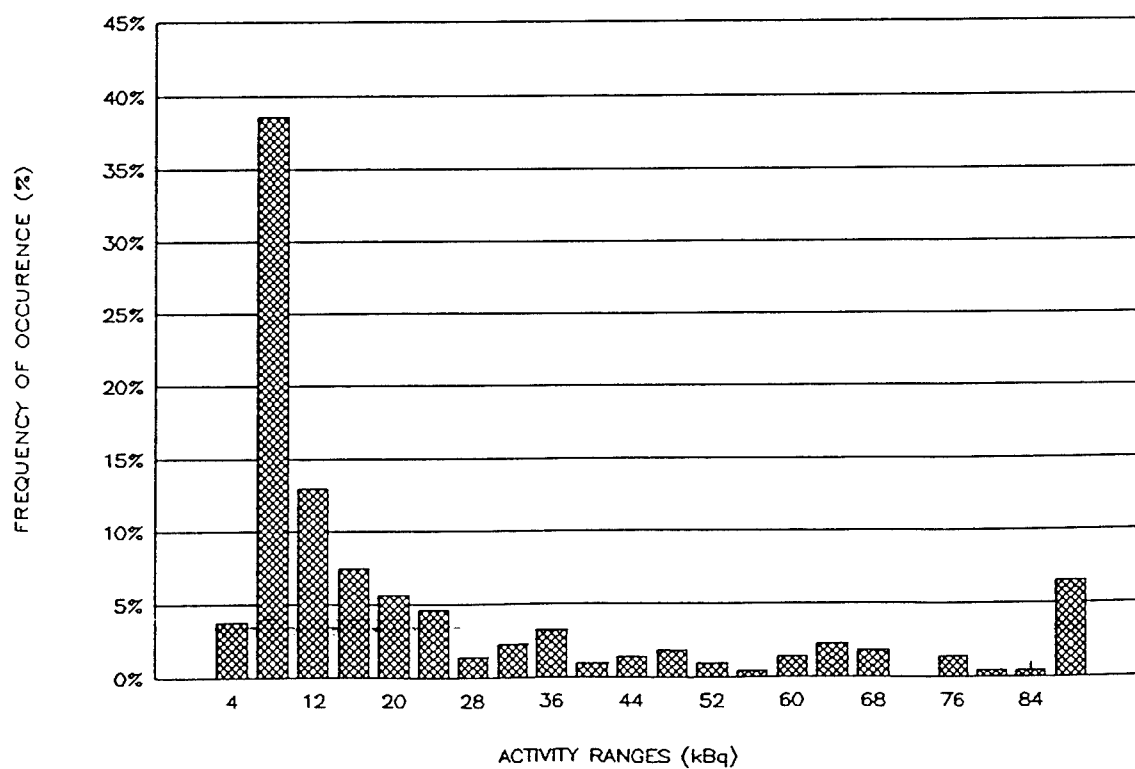
CLEAN SOIL SPECIFIC ACTIVITY

SORTER 1 LOG DATA FOR 22-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 22-Jul-93



JA SOIL CLEANUP PLANT LOG SUMMARY

SORTER 2 22-Jul-93

AVERAGE BACKGROUND COUNT RATE 0.79 ± 0.03 c/sec
 SORTER SOIL DENSITY 1.3 tons/m³
 GROUND SOIL DENSITY 1.65 tons/m³

	CONTAMINATED	CLEAN
MASS TOTAL	0.23 tons	82.9 tons
MAXIMUM/SORT	61.3 kg	58.3 kg
MINIMUM/SORT	0.7 kg	54.6 kg

		99.7%
WEIGHT RECOVERY OR VOLUME RECOVERY		
EQUIVALENT SOIL-IN-GROUND	0.19 yd ³	65.7 yd ³ 65.9 yd ³ /day

PARTICLE ACTIVITY (MAXIMUM ESTIMATE)

TOTAL	4,139 kBq
MAXIMUM/SORT	271 kBq
MINIMUM/SORT	3.3 kBq

	1,397 kBq	(3,253)kBq
DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY		
MAXIMUM/SORT	159 kBq	15 kBq
MINIMUM/SORT	0 Bq	-12 kBq
SPECIFIC ACTIVITY	5,965 Bq/kg	(39)Bq/kg

WORK HISTORY			
WORK DAY START	05:00 AM	WORK DAY END	03:30 PM
PLANT START-UP	05:00 AM	PLANT SHUT-DOWN	03:30 PM
START SOIL PROCESSING	05:45 AM	END SOIL PROCESSING	03:01 PM
LUNCH START	11:30 AM	LUNCH PERIOD	0.5 hr

WORK HOURS	10.0 hr
AVAILABLE HOURS	10.0 hr
ACTUAL PROCESS HOURS (total 20-sec records)	7.92 hr
DOWN-TIME	2.08 hr
TOTAL SYSTEM PAUSE	1.30 hr
NONAVAILABLE HOURS	0.0 hr
START-UP	0.76 hr
SHUT-DOWN	0.47 hr
PLANT PERFORMANCE	79.2%
PRODUCTIVITY	79.2%

TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 1,593

NONPROCESS RECORDS (Test, calibration, etc) 21

20-SEC PROCESS RECORDS

TOTAL SORT	1 MD>0 & MND=0
NO SORT	1,293 AD=0 & MD=0 & MND>0
SOME SORT	132 AD>0&0<MD<MNDmax&MND<MNDmax
UNEXPLAINED RECORDS	0
0<AD<1kBq & MD>0	1
AD=0 & MD	0
AD<0 & MD	0
ACT_P <5 kBq	13 7.8%

UNEXPLAIN	PAUSE
TIME	TIME
12:43:13	11:24
14:16:53	12:42

JA SOIL CLEANUP PLANT LOG SUMMARY

2-SEC COUNT PERIODS 14,260
 2-SEC RECORDS WITH SORTS 167 (ACT_P >0 kBq)
 2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR

2 DETECTORS	45	90.0%
3 DETECTORS	4	8.0%
4 DETECTORS	1	2.0%
5 DETECTORS	0	0.0%
6 DETECTORS	0	0.0%
7 DETECTORS	0	0.0%
8 DETECTORS	0	0.0%
TOTAL	50	

NET 2-SEC RECORDS WITH SORTS 117
 2-SEC PERIODS WITH NO SORTS 14,143
 AVG TIME BETWEEN 2-SEC SORTS 243.8 sec

1-GATE SORTS	88	ACT_ND	NUMBER	SPEC_A	ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)	(kBq)
1	5	5.7%	-14000	7	-240	4000	3	1.8%
2	11	12.5%	-12000	6	-206	8000	62	37.1%
3	17	19.3%	-10000	7	-172	12000	27	16.2%
4	17	19.3%	-8000	33	-137	16000	16	9.6%
5	22	25.0%	-6000	107	-103	20000	13	7.8%
6	10	11.4%	-4000	294	-69	24000	10	6.0%
7	6	6.8%	-2000	352	-34	28000	3	1.8%
8	0	0.0%	0	333	0	32000	1	0.6%
TOTAL	88		2000	190	34	36000	1	0.6%
			4000	78	69	40000	3	1.8%
2-GATE SORTS	79		6000	25	103	44000	1	0.6%
DETECTR	SORTS	FREQ%	8000	9	137	48000	1	0.6%
8			10000	4	172	52000	2	1.2%
9	7	8.9%	12000	1	206	56000	5	3.0%
10	11	13.9%	14000	0	240	60000	1	0.6%
11	17	21.5%	16000	1	274	64000	4	2.4%
12	19	24.1%	18000	0	309	68000	4	2.4%
13	18	22.8%	20000	0	343	72000	3	1.8%
14	5	6.3%	22000	0	377	76000	0	0.0%
15	2	2.5%	24000	0	412	80000	0	0.0%
TOTAL	79		26000	0	446	84000	1	0.6%
			>28000	0	0	>84000	6	3.6%
			TOTAL	1447		TOTAL	167	

SUMMARY TOTALS

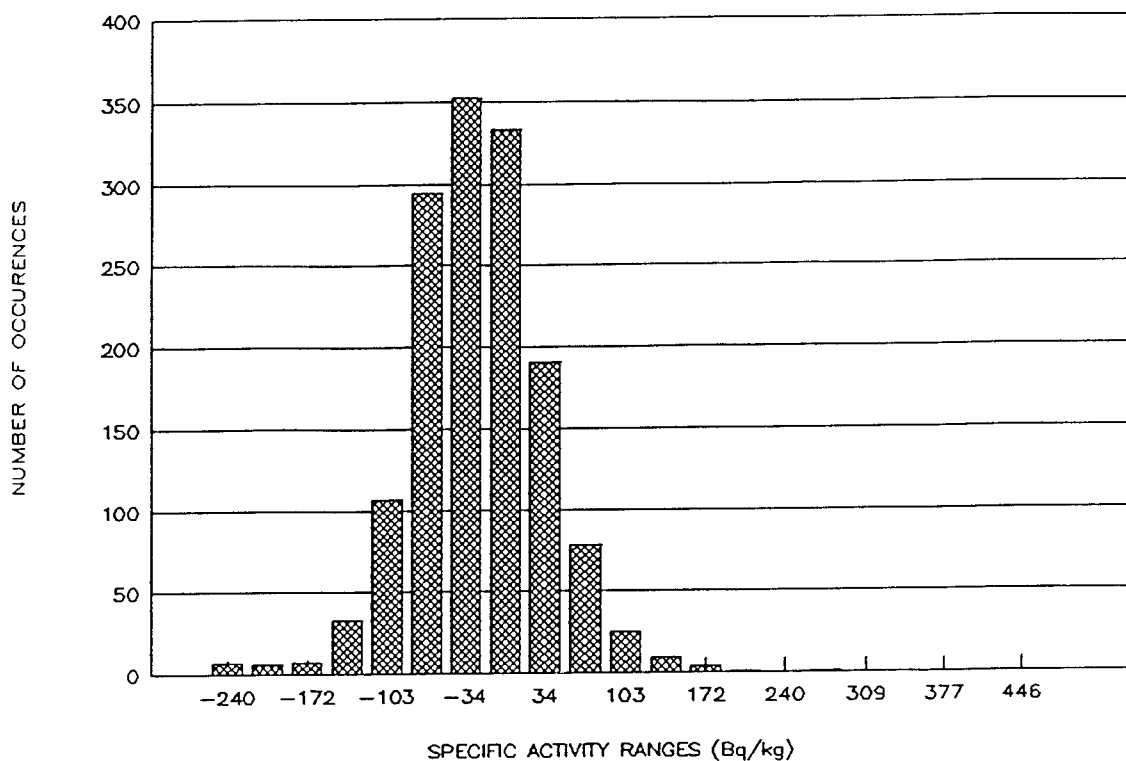
HOT PARTICLE EVENTS	155	SORTS BY ONE GATE ONLY	88
MULTIPARTICLE EVENTS	83	SORTS BY TWO GATES	79
DISTRIBUTED EVENTS	84		

REC CODE EXPLANATION

1.00 Source check (Soil on belt)
 2.00 Empty belt
 3.00 Test (No process soil)

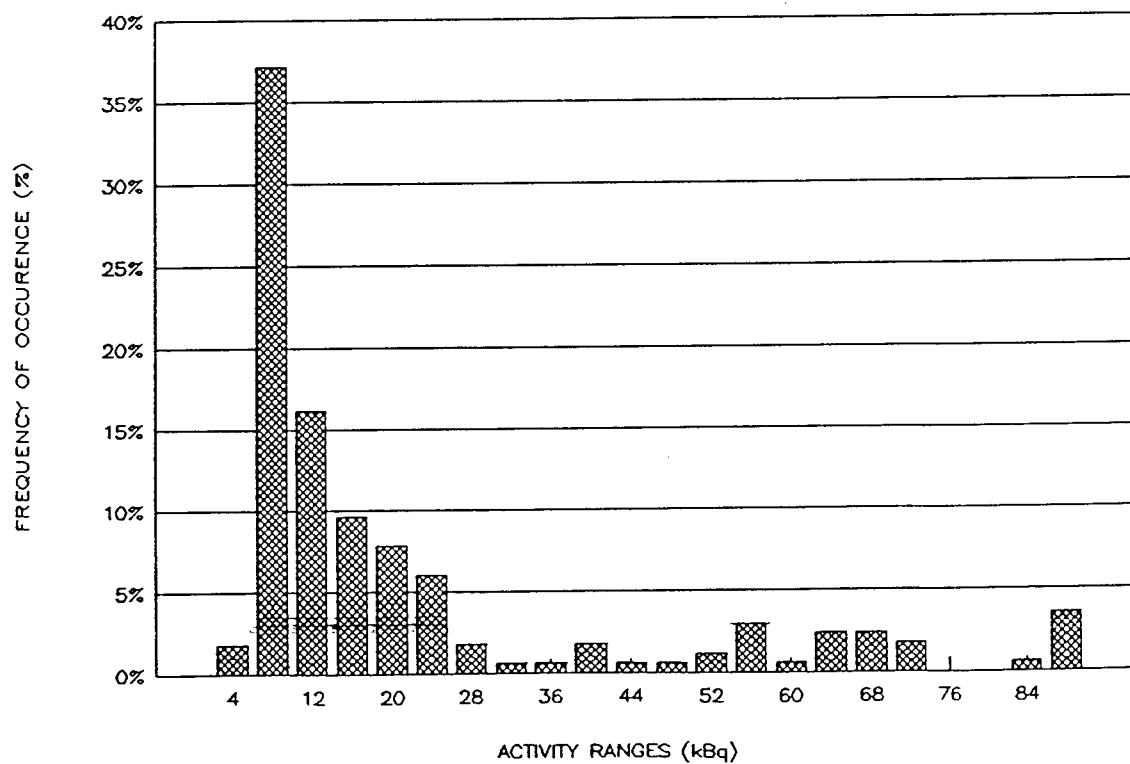
CLEAN SOIL SPECIFIC ACTIVITY

SORTER 2 LOG DATA FOR 22-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 22-Jul-93



JA SOIL CLEANUP PLANT LOG SUMMARY

SORTER 1 23-Jul-93

AVERAGE BACKGROUND COUNT RATE 0.75 ± 0.05 c/sec
 SORTER SOIL DENSITY 1.3 tons/m³
 GROUND SOIL DENSITY 1.65 tons/m³

	CONTAMINATED	CLEAN
MASS TOTAL	0.20 tons	78.3 tons
MAXIMUM/SORT	5.1 kg	58.2 kg
MINIMUM/SORT	0.7 kg	53.1 kg

WEIGHT RECOVERY OR VOLUME RECOVERY		99.8%
EQUIVALENT SOIL-IN-GROUND	0.15 yd ³	62.1 yd ³ 62.2 yd ³ /day

PARTICLE ACTIVITY (MAXIMUM ESTIMATE)

TOTAL	6,352 kBq
MAXIMUM/SORT	1,134 kBq
MINIMUM/SORT	2.7 kBq

DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY	1,946 kBq	1,237 kBq
MAXIMUM/SORT	637 kBq	12 kBq
MINIMUM/SORT	0 Bq	-9 kBq
SPECIFIC ACTIVITY	9,957 Bq/kg	16 Bq/kg

WORK HISTORY

WORK DAY START	05:00 AM	WORK DAY END	03:30 PM
PLANT START-UP	05:00 AM	PLANT SHUT-DOWN	03:30 PM
START SOIL PROCESSING	05:28 AM	END SOIL PROCESSING	03:01 PM
LUNCH START	11:30 AM	LUNCH PERIOD	0.5 hr

WORK HOURS	10.0 hr
AVAILABLE HOURS	10.0 hr
ACTUAL PROCESS HOURS (total 20-sec records)	7.49 hr
DOWN-TIME	2.51 hr
TOTAL SYSTEM PAUSE	1.99 hr
NONAVAILABLE HOURS	0.0 hr
START-UP	0.48 hr
SHUT-DOWN	0.48 hr
PLANT PERFORMANCE	74.9%
PRODUCTIVITY	74.9%

TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)	1,521
NONPROCESS RECORDS (Test, calibration, etc)	20

20-SEC PROCESS RECORDS	1,349
TOTAL SORT	0 MD>0 & MND=0
NO SORT	1,204 AD=0 & MD=0 & MND>0
SOME SORT	145 AD>0&0<MD<MNDmax&MND<MNDmax
UNEXPLAINED RECORDS	0

0<AD<1kBq & MD>0	0	UNEXPLAIN	PAUSE
AD=0 & MD	0	TIME	TIME
AD<0 & MD	0	None	11:26
ACT_P <5 kBq	31 18.0%		13:17

JA SOIL CLEANUP PLANT LOG SUMMARY

2-SEC COUNT PERIODS 13,490
 2-SEC RECORDS WITH SORTS 172 (ACT_P >0 kBq)
 2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR

2 DETECTORS	37	82.2%
3 DETECTORS	8	17.8%
4 DETECTORS	0	0.0%
5 DETECTORS	0	0.0%
6 DETECTORS	0	0.0%
7 DETECTORS	0	0.0%
8 DETECTORS	0	0.0%
TOTAL	45	
NET 2-SEC RECORDS WITH SORTS	127	
2-SEC PERIODS WITH NO SORTS	13,363	
AVG TIME BETWEEN 2-SEC SORTS	212.4 sec	

1-GATE SORTS DETECTR	81 SORTS	ACT_ND FREQ% (Bq)	NUMBER (#)	SPEC_A (Bq/kg)	ACT_P (Bq)	SORT FREQ% (#)	ACT_P (kBq)
1	2	2.5%	-14000	1	-241	4000	9 5.2% 4
2	4	4.9%	-12000	1	-206	8000	60 34.9% 8
3	10	12.3%	-10000	4	-172	12000	37 21.5% 12
4	12	14.8%	-8000	6	-137	16000	15 8.7% 16
5	18	22.2%	-6000	10	-103	20000	8 4.7% 20
6	16	19.8%	-4000	56	-69	24000	5 2.9% 24
7	16	19.8%	-2000	160	-34	28000	2 1.2% 28
8	3	3.7%	0	275	0	32000	6 3.5% 32
TOTAL	81		2000	380	34	36000	3 1.7% 36
			4000	275	69	40000	1 0.6% 40
2-GATE SORTS	91	6000	137	103	44000	1 0.6% 44	
DETECTR	SORTS	FREQ%	8000	47	137	48000	1 0.6% 48
8			10000	14	172	52000	0 0.0% 52
9	4	4.4%	12000	3	206	56000	2 1.2% 56
10	8	8.8%	14000	0	241	60000	2 1.2% 60
11	18	19.8%	16000	0	275	64000	0 0.0% 64
12	18	19.8%	18000	0	309	68000	4 2.3% 68
13	20	22.0%	20000	0	344	72000	3 1.7% 72
14	16	17.6%	22000	0	378	76000	0 0.0% 76
15	7	7.7%	24000	0	412	80000	3 1.7% 80
TOTAL	91		26000	0	447	84000	0 0.0% 84
			>28000	0	0	>84000	10 5.8% >84
			TOTAL	1369		TOTAL	172

SUMMARY TOTALS

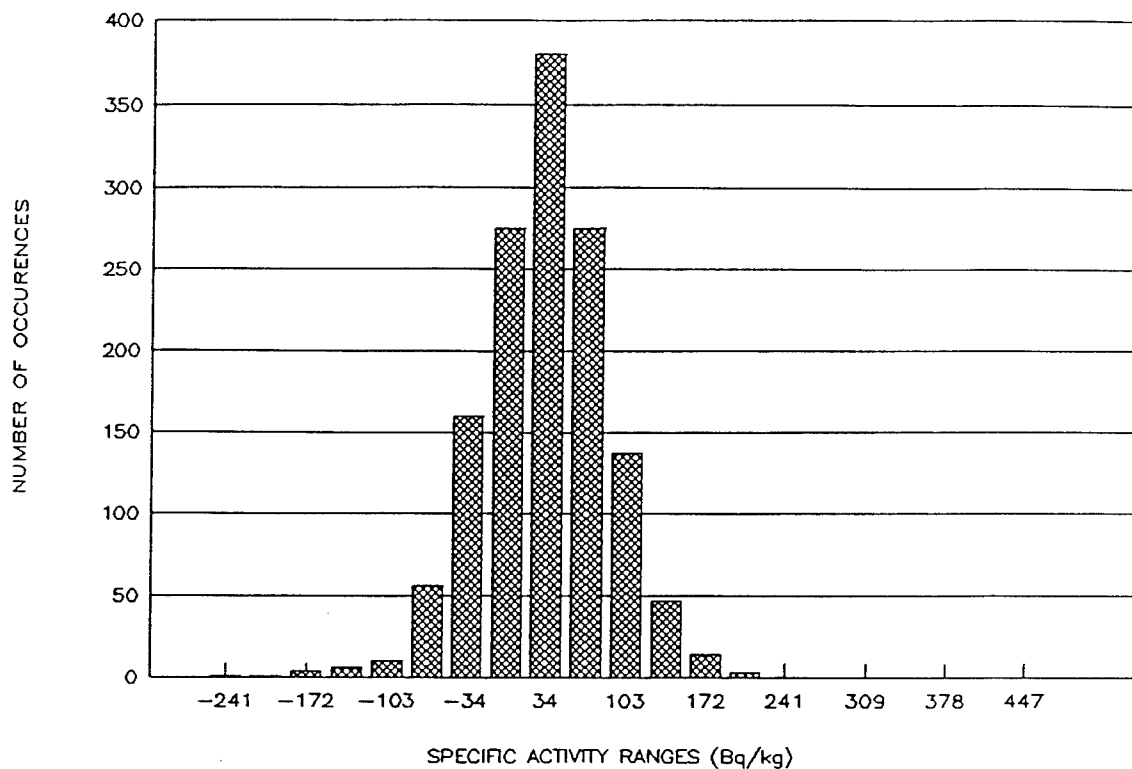
HOT PARTICLE EVENTS	180	SORTS BY ONE GATE ONLY	81
MULTIPARTICLE EVENTS	88	SORTS BY TWO GATES	91
DISTRIBUTED EVENTS	0		

REC CODE EXPLANATION

1.00 Source check (Soil on belt)
 2.00 Empty belt
 3.00 Test (No process soil)

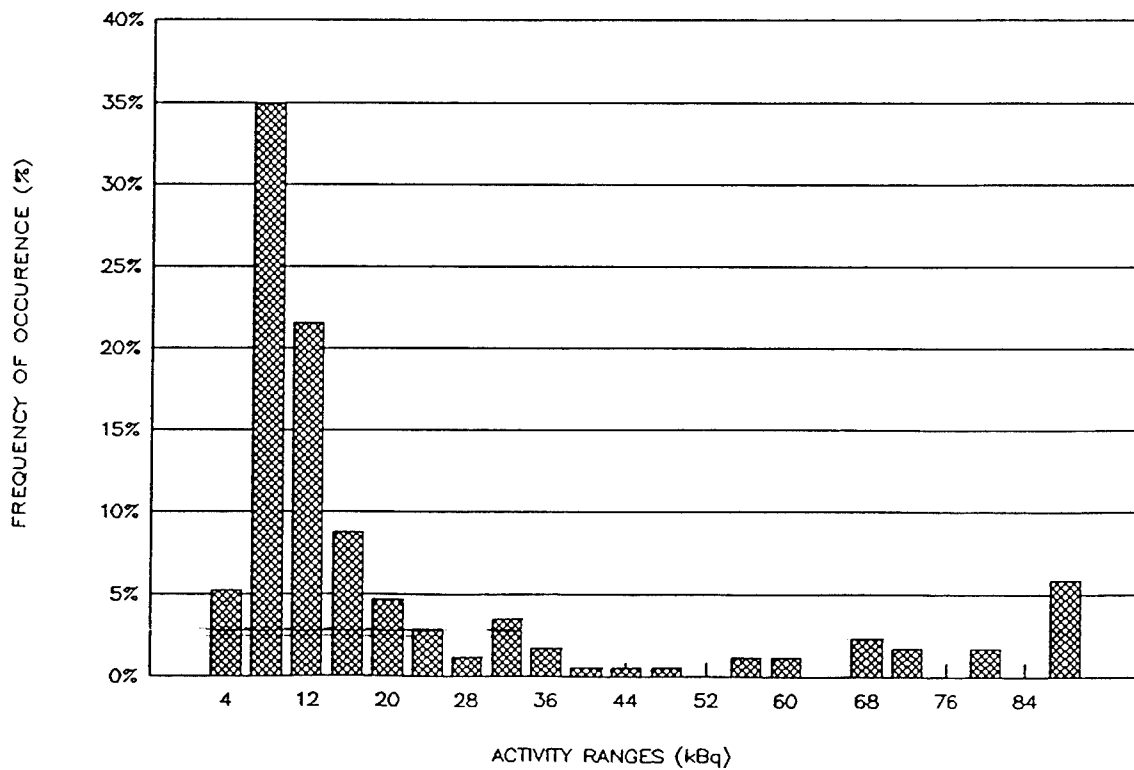
CLEAN SOIL SPECIFIC ACTIVITY

SORTER 1 LOG DATA FOR 23-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 23-Jul-93



JA SOIL CLEANUP PLANT LOG SUMMARY

SORTER 2 23-Jul-93

AVERAGE BACKGROUND COUNT RATE 0.79 ± 0.03 c/sec
 SORTER SOIL DENSITY 1.3 tons/m³
 GROUND SOIL DENSITY 1.65 tons/m³

	CONTAMINATED	CLEAN
MASS TOTAL	0.18 tons	74.4 tons
MAXIMUM/SORT	5.1 kg	58.3 kg
MINIMUM/SORT	0.7 kg	53.2 kg

WEIGHT RECOVERY OR VOLUME RECOVERY 99.8%
 EQUIVALENT SOIL-IN-GROUND 0.14 yd³ 59.0 yd³ 59.1 yd³/day

PARTICLE ACTIVITY (MAXIMUM ESTIMATE)
 TOTAL 3,650 kBq
 MAXIMUM/SORT 540 kBq
 MINIMUM/SORT 3.3 kBq

	CONTAMINATED	CLEAN
DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY	1,276 kBq	3,209 kBq
MAXIMUM/SORT	329 kBq	20 kBq
MINIMUM/SORT	0 Bq	-13 kBq
SPECIFIC ACTIVITY	7,158 Bq/kg	43 Bq/kg

WORK HISTORY			
WORK DAY START	05:00 AM	WORK DAY END	03:30 PM
PLANT START-UP	05:00 AM	PLANT SHUT-DOWN	03:30 PM
START SOIL PROCESSING	05:28 AM	END SOIL PROCESSING	03:01 PM
LUNCH START	11:30 AM	LUNCH PERIOD	0.5 hr

WORK HOURS	10.0 hr
AVAILABLE HOURS	10.0 hr
ACTUAL PROCESS HOURS (total 20-sec records)	7.11 hr
DOWN-TIME	2.89 hr
TOTAL SYSTEM PAUSE	2.39 hr
NONAVAILABLE HOURS	0.0 hr
START-UP	0.48 hr
SHUT-DOWN	0.47 hr
PLANT PERFORMANCE	71.1%
PRODUCTIVITY	71.1%

TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 1,440
 NONPROCESS RECORDS (Test, calibration, etc) 19

20-SEC PROCESS RECORDS		
TOTAL SORT		0 MD>0 & MND=0
NO SORT		1,134 AD=0 & MD=0 & MND>0
SOME SORT		145 AD>0&0<MD<MNDmax&MND<MNDmax
UNEXPLAINED RECORDS		0
0<AD<1kBq & MD>0	0	UNEXPLAIN
AD=0 & MD	0	TIME
AD<0 & MD	0	None
ACT_P <5 kBq	19 11.8%	PAUSE
		TIME
		05:39
		11:25

JA SOIL CLEANUP PLANT LOG SUMMARY

2-SEC COUNT PERIODS

12,790

13:17

2-SEC RECORDS WITH SORTS

161 (ACT_P >0 kBq)

2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR

2 DETECTORS	38	86.4%
3 DETECTORS	6	13.6%
4 DETECTORS	0	0.0%
5 DETECTORS	0	0.0%
6 DETECTORS	0	0.0%
7 DETECTORS	0	0.0%
8 DETECTORS	0	0.0%

TOTAL 44

NET 2-SEC RECORDS WITH SORTS

117

2-SEC PERIODS WITH NO SORTS

12,673

AVG TIME BETWEEN 2-SEC SORTS

218.6 sec

1-GATE SORTS	80	ACT_NO	NUMBER	SPEC_A	ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)	(kBq)
1	3	3.8%	-14000	1	-240	4000	6	3.7%
2	11	13.8%	-12000	3	-206	8000	59	36.6%
3	17	21.3%	-10000	2	-172	12000	31	19.3%
4	18	22.5%	-8000	8	-137	16000	15	9.3%
5	8	10.0%	-6000	8	-103	20000	10	6.2%
6	11	13.8%	-4000	22	-69	24000	5	3.1%
7	10	12.5%	-2000	71	-34	28000	2	1.2%
8	2	2.5%	0	168	0	32000	7	4.3%
TOTAL	80		2000	292	34	36000	5	3.1%
			4000	325	69	40000	2	1.2%
2-GATE SORTS	81	6000	247	103	44000	2	1.2%	44
DETECTR	SORTS	FREQ%	8000	97	137	48000	3	1.9%
8			10000	31	172	52000	0	0.0%
9	6	7.4%	12000	13	206	56000	0	0.0%
10	10	12.3%	14000	4	240	60000	1	0.6%
11	19	23.5%	16000	3	274	64000	4	2.5%
12	16	19.8%	18000	2	309	68000	1	0.6%
13	11	13.6%	20000	0	343	72000	3	1.9%
14	12	14.8%	22000	1	377	76000	1	0.6%
15	7	8.6%	24000	0	412	80000	1	0.6%
TOTAL	81		26000	0	446	84000	0	0.0%
			>28000	0	0	>84000	3	1.9%
			TOTAL	1298		TOTAL	161	

SUMMARY TOTALS

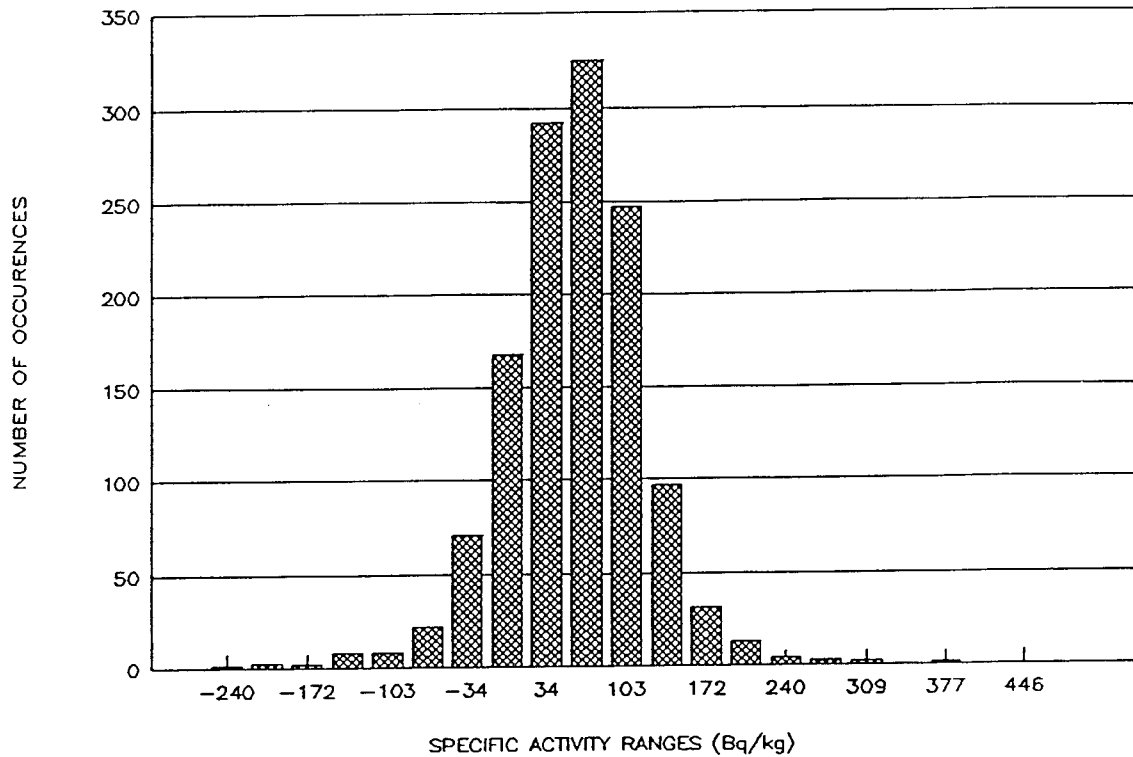
HOT PARTICLE EVENTS	164	SORTS BY ONE GATE ONLY	80
MULTIPARTICLE EVENTS	81	SORTS BY TWO GATES	81
DISTRIBUTED EVENTS	0		

REC CODE EXPLANATION

1.00 Source check (Soil on belt)
 2.00 Empty belt
 3.00 Test (No process soil)

CLEAN SOIL SPECIFIC ACTIVITY

SORTER 2 LOG DATA FOR 23-Jul-93



JA SOIL CLEANUP PLANT LOG SUMMARY

SORTER 1 24-Jul-93

AVERAGE BACKGROUND COUNT RATE 0.73 ± 0.04 c/sec
 SORTER SOIL DENSITY 1.3 tons/m³
 GROUND SOIL DENSITY 1.65 tons/m³

	CONTAMINATED	CLEAN
MASS TOTAL	0.12 tons	61.0 tons
MAXIMUM/SORT	2.9 kg	58.2 kg
MINIMUM/SORT	0.7 kg	55.3 kg

WEIGHT RECOVERY OR VOLUME RECOVERY		99.8%
EQUIVALENT SOIL-IN-GROUND	0.10 yd ³	48.4 yd ³ 48.5 yd ³ /day

PARTICLE ACTIVITY (MAXIMUM ESTIMATE)

TOTAL	2,566 kBq
MAXIMUM/SORT	279 kBq
MINIMUM/SORT	3.1 kBq

DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY	827 kBq	1,985 kBq
MAXIMUM/SORT	180 kBq	17 kBq
MINIMUM/SORT	0 Bq	-11 kBq
SPECIFIC ACTIVITY	6,783 Bq/kg	33 Bq/kg

WORK HISTORY

WORK DAY START	05:00 AM	WORK DAY END	03:30 PM
PLANT START-UP	05:00 AM	PLANT SHUT-DOWN	12:15 PM
START SOIL PROCESSING	05:53 AM	END SOIL PROCESSING	11:46 AM
LUNCH START	12:30 PM	LUNCH PERIOD	0.5 hr

WORK HOURS	10.0 hr
AVAILABLE HOURS	7.2 hr
ACTUAL PROCESS HOURS (total 20-sec records)	5.84 hr
DOWN-TIME	1.41 hr
TOTAL SYSTEM PAUSE	0.00 hr
NONAVAILABLE HOURS	2.8 hr
START-UP	0.90 hr
SHUT-DOWN	0.48 hr
PLANT PERFORMANCE	80.5%
PRODUCTIVITY	58.4%

TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 1,172

NONPROCESS RECORDS (Test, calibration, etc) 14

20-SEC PROCESS RECORDS

TOTAL SORT	0 MD>0 & MND=0
NO SORT	954 AD=0 & MD=0 & MND>0
SOME SORT	97 AD>0&0<MD<MNDmax&MND<MNDmax
UNEXPLAINED RECORDS	0

		UNEXPLAIN	PAUSE
		TIME	TIME
0<AD<1kBq & MD>0	0	None	None
AD=0 & MD	0		
AD<0 & MD	0		

ACT_P <5 kBq 21 17.4%

JA SOIL CLEANUP PLANT LOG SUMMARY

2-SEC COUNT PERIODS 10,510
 2-SEC RECORDS WITH SORTS 121 (ACT_P >0 kBq)
 2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR

2 DETECTORS	28	84.8%
3 DETECTORS	4	12.1%
4 DETECTORS	1	3.0%
5 DETECTORS	0	0.0%
6 DETECTORS	0	0.0%
7 DETECTORS	0	0.0%
8 DETECTORS	0	0.0%
TOTAL	33	

NET 2-SEC RECORDS WITH SORTS 88
 2-SEC PERIODS WITH NO SORTS 10,422
 AVG TIME BETWEEN 2-SEC SORTS 238.9 sec

1-GATE SORTS DETECTR	SORTS	63 FREQ%	ACT_MD (Bq)	NUMBER (#)	SPEC_A (Bq/kg)	ACT_P (Bq)	SORT FREQ (#)	ACT_P (kBq)
1	0	0.0%	-14000	0	-241	4000	5 4.1%	4
2	3	4.8%	-12000	0	-206	8000	52 43.0%	8
3	7	11.1%	-10000	3	-172	12000	23 19.0%	12
4	11	17.5%	-8000	6	-137	16000	12 9.9%	16
5	13	20.6%	-6000	3	-103	20000	4 3.3%	20
6	12	19.0%	-4000	16	-69	24000	0 0.0%	24
7	13	20.6%	-2000	68	-34	28000	6 5.0%	28
8	4	6.3%	0	191	0	32000	2 1.7%	32
TOTAL	63		2000	272	34	36000	1 0.8%	36
			4000	277	69	40000	0 0.0%	40
2-GATE SORTS		58	6000	141	103	44000	1 0.8%	44
DETECTR	SORTS	FREQ%	8000	69	137	48000	0 0.0%	48
8			10000	13	172	52000	1 0.8%	52
9	1	1.7%	12000	3	206	56000	0 0.0%	56
10	6	10.3%	14000	3	241	60000	4 3.3%	60
11	8	13.8%	16000	0	275	64000	1 0.8%	64
12	14	24.1%	18000	1	309	68000	3 2.5%	68
13	12	20.7%	20000	0	344	72000	0 0.0%	72
14	8	13.8%	22000	0	378	76000	1 0.8%	76
15	9	15.5%	24000	0	412	80000	0 0.0%	80
TOTAL	58		26000	0	447	84000	0 0.0%	84
			>28000	0	0	>84000	5 4.1%	>84
			TOTAL	1066		TOTAL	121	

SUMMARY TOTALS

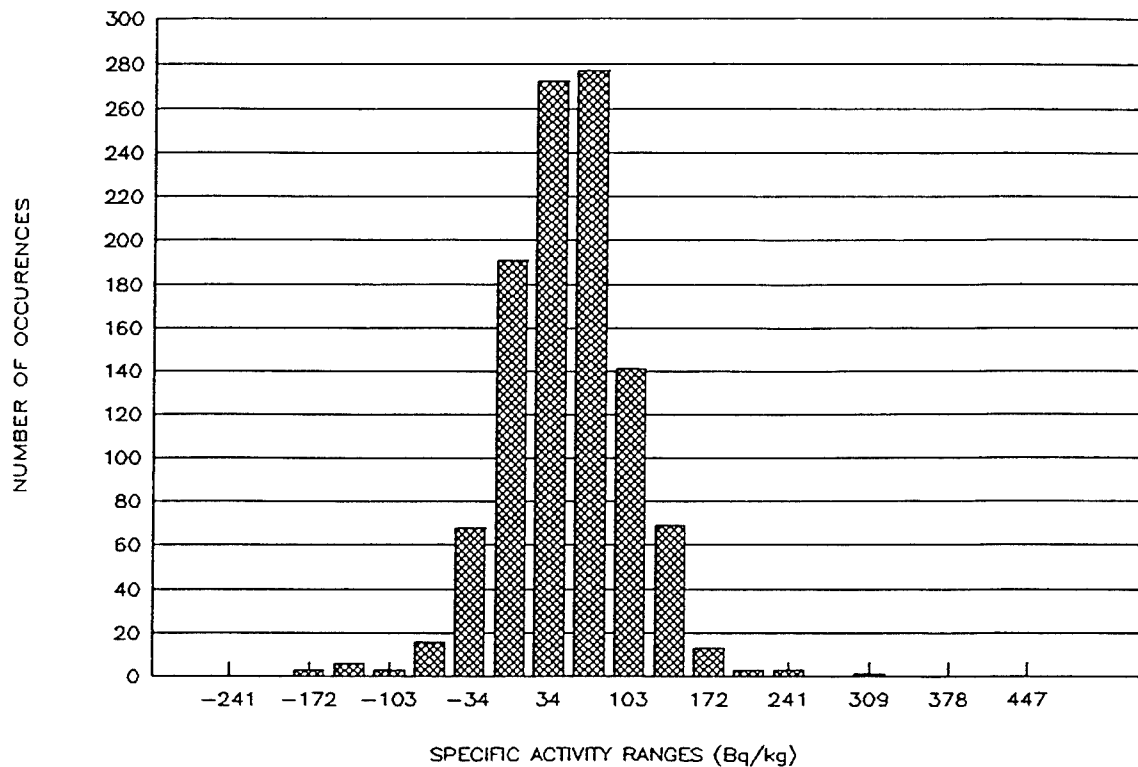
HOT PARTICLE EVENTS	115	SORTS BY ONE GATE ONLY	63
MULTIPARTICLE EVENTS	52	SORTS BY TWO GATES	58
DISTRIBUTED EVENTS	0		

REC CODE EXPLANATION

1.00 Source check (Soil on belt)
 2.00 Empty belt
 3.00 Test (No process soil)

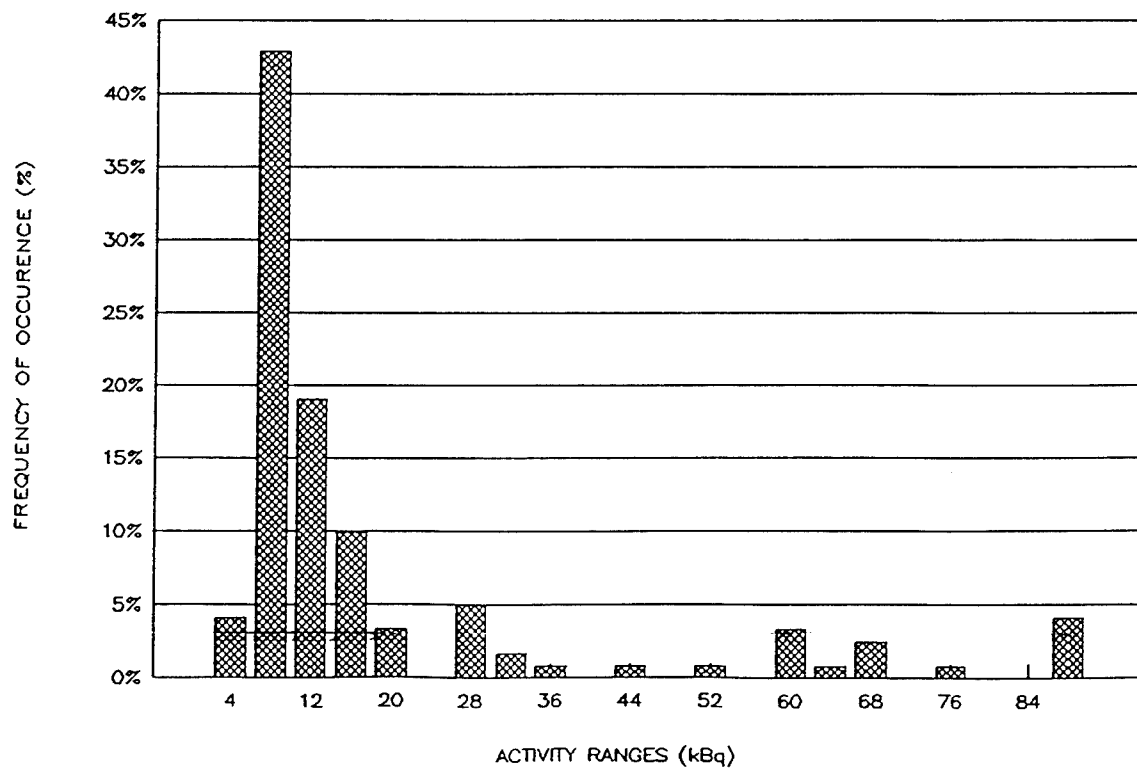
CLEAN SOIL SPECIFIC ACTIVITY

SORTER 1 LOG DATA FOR 24-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 24-Jul-93



JA SOIL CLEANUP PLANT LOG SUMMARY

SORTER 2 24-Jul-93

AVERAGE BACKGROUND COUNT RATE 0.80 ± 0.03 c/sec
 SORTER SOIL DENSITY 1.3 tons/m³
 GROUND SOIL DENSITY 1.65 tons/m³

	CONTAMINATED	CLEAN
MASS TOTAL	0.21 tons	55.3 tons
MAXIMUM/SORT	58.3 kg	58.3 kg
MINIMUM/SORT	0.7 kg	55.3 kg

WEIGHT RECOVERY OR VOLUME RECOVERY		99.6%
EQUIVALENT SOIL-IN-GROUND	0.17 yd ³	43.9 yd ³ 44.0 yd ³ /day

PARTICLE ACTIVITY (MAXIMUM ESTIMATE)

TOTAL	1,572 kBq
MAXIMUM/SORT	80 kBq
MINIMUM/SORT	3.0 kBq

DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY	670 kBq	(638)kBq
MAXIMUM/SORT	48 kBq	10 kBq
MINIMUM/SORT	0 Bq	-14 kBq
SPECIFIC ACTIVITY	3,191 Bq/kg	(12)Bq/kg

WORK HISTORY

WORK DAY START	05:00 AM	WORK DAY END	03:30 PM
PLANT START-UP	05:00 AM	PLANT SHUT-DOWN	12:15 PM
START SOIL PROCESSING	05:54 AM	END SOIL PROCESSING	11:47 AM
LUNCH START	12:30 PM	LUNCH PERIOD	0.5 hr

WORK HOURS	10.0 hr
AVAILABLE HOURS	7.2 hr
ACTUAL PROCESS HOURS (total 20-sec records)	5.29 hr
DOWN-TIME	1.96 hr
TOTAL SYSTEM PAUSE	0.61 hr
NONAVAILABLE HOURS	2.8 hr
START-UP	0.90 hr
SHUT-DOWN	0.46 hr
PLANT PERFORMANCE	73.0%
PRODUCTIVITY	52.9%

TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 1,033

NONPROCESS RECORDS (Test, calibration, etc) 6

20-SEC PROCESS RECORDS	953
TOTAL SORT	2 MD>0 & MND=0
NO SORT	867 AD=0 & MD=0 & MND>0
SOME SORT	84 AD>0&0<MD<MNDmax&MND<MNDmax
UNEXPLAINED RECORDS	0

		UNEXPLAIN	PAUSE
		TIME	TIME
0<AD<1kBq & MD>0	1	10:57:54	06:15
AD=0 & MD	0		
AD<0 & MD	0		
ACT_P <5 kBq	9 11.3%		06:35

JA SOIL CLEANUP PLANT LOG SUMMARY

2-SEC COUNT PERIODS

9,530

07:26

2-SEC RECORDS WITH SORTS

80 (ACT_P >0 kBq)

08:12

2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR

2 DETECTORS	20	74.1%
3 DETECTORS	6	22.2%
4 DETECTORS	1	3.7%
5 DETECTORS	0	0.0%
6 DETECTORS	0	0.0%
7 DETECTORS	0	0.0%
8 DETECTORS	0	0.0%

TOTAL 27

NET 2-SEC RECORDS WITH SORTS

53

2-SEC PERIODS WITH NO SORTS

9,477

AVG TIME BETWEEN 2-SEC SORTS

359.6 sec

1-GATE SORTS	44	ACT_NO	NUMBER	SPEC_A	ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)	(kBq)
1	0	0.0%	-14000	0	-240	4000	3	3.8%
2	9	20.5%	-12000	8	-206	8000	29	36.3%
3	8	18.2%	-10000	4	-172	12000	13	16.3%
4	7	15.9%	-8000	7	-137	16000	6	7.5%
5	7	15.9%	-6000	20	-103	20000	6	7.5%
6	6	13.6%	-4000	75	-69	24000	2	2.5%
7	6	13.6%	-2000	196	-34	28000	2	2.5%
8	1	2.3%	0	254	0	32000	3	3.8%
TOTAL	44		2000	216	34	36000	2	2.5%
			4000	125	69	40000	1	1.3%
2-GATE SORTS	36		6000	42	103	44000	1	1.3%
DETECTR	SORTS	FREQ%	8000	10	137	48000	1	1.3%
8			10000	1	172	52000	1	1.3%
9	3	8.3%	12000	1	206	56000	3	3.8%
10	7	19.4%	14000	0	240	60000	2	2.5%
11	5	13.9%	16000	0	274	64000	1	1.3%
12	8	22.2%	18000	0	309	68000	1	1.3%
13	7	19.4%	20000	0	343	72000	0	0.0%
14	5	13.9%	22000	0	377	76000	2	2.5%
15	1	2.8%	24000	0	412	80000	0	0.0%
TOTAL	36		26000	0	446	84000	1	1.3%
			>28000	0	0	>84000	0	0.0%
			TOTAL	959		TOTAL	80	

SUMMARY TOTALS

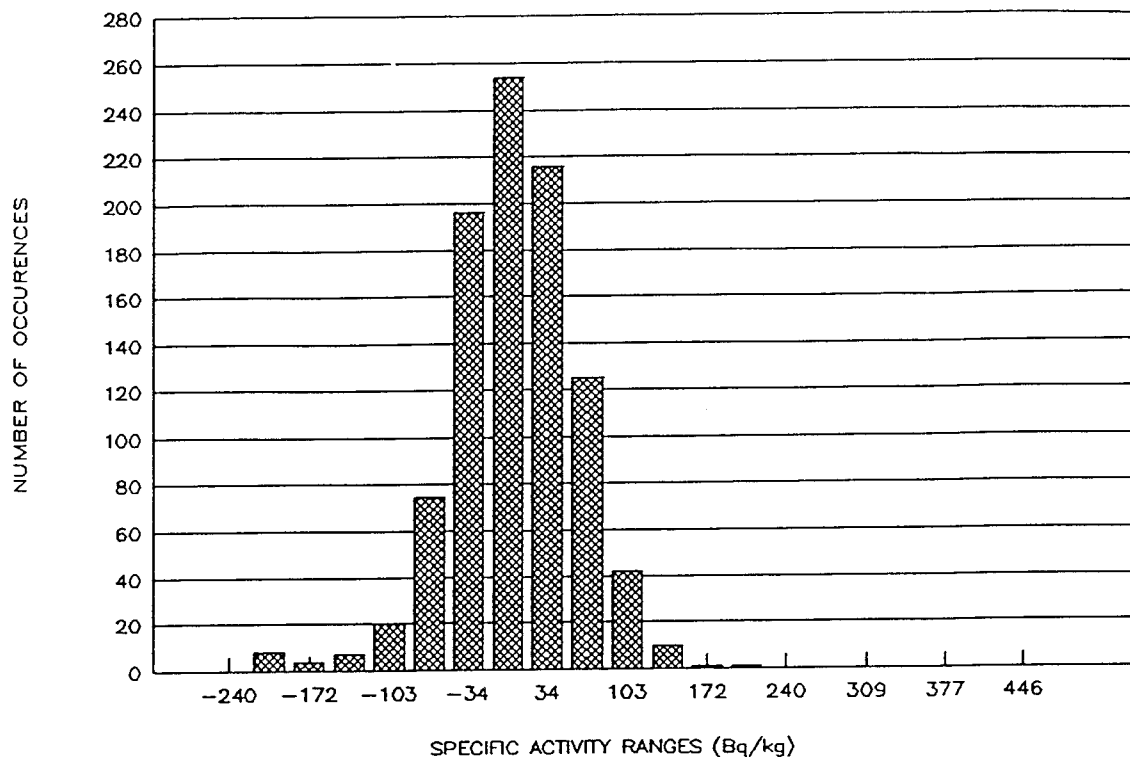
HOT PARTICLE EVENTS	77	SORTS BY ONE GATE ONLY	44
MULTIPARTICLE EVENTS	55	SORTS BY TWO GATES	36
DISTRIBUTED EVENTS	157		

REC CODE EXPLANATION

1.00 Source check (Soil on belt)
 2.00 Empty belt
 3.00 Test (No process soil)

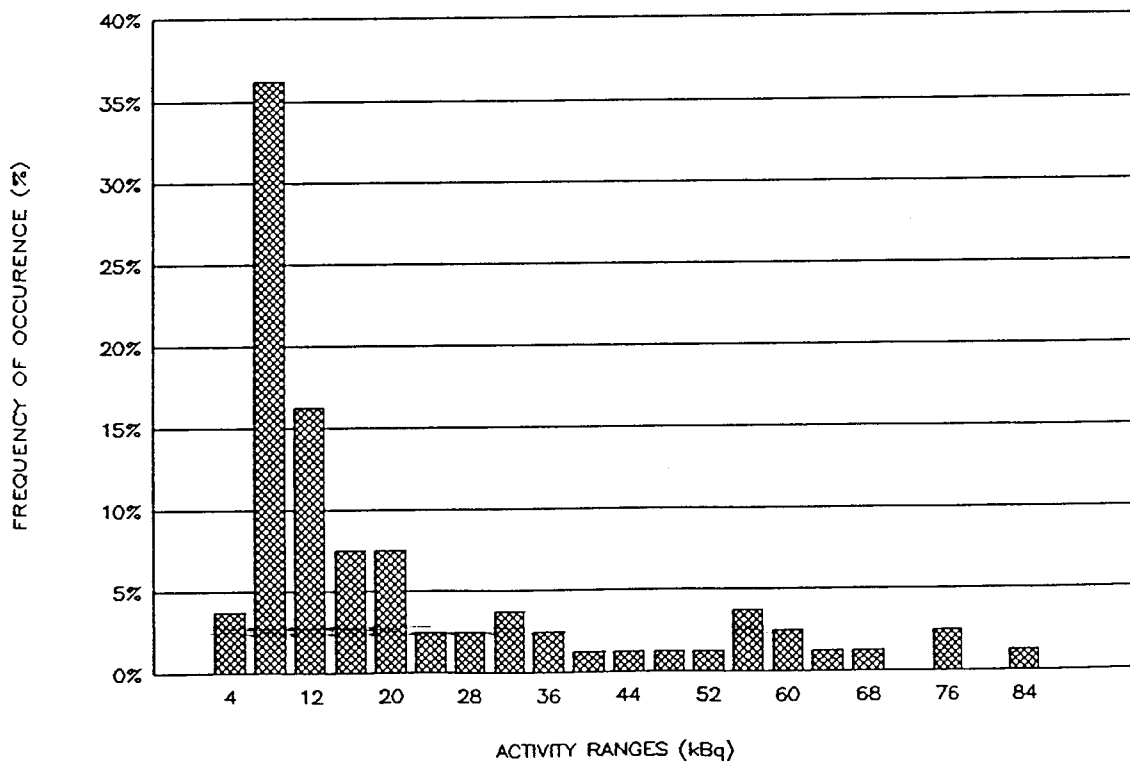
CLEAN SOIL SPECIFIC ACTIVITY

SORTER 2 LOG DATA FOR 24-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 24-Jul-93



JA SOIL CLEANUP PLANT LOG SUMMARY

SORTER 1 26-Jul-93

AVERAGE BACKGROUND COUNT RATE 0.72 ± 0.04 c/sec
 SORTER SOIL DENSITY 1.3 tons/m³
 GROUND SOIL DENSITY 1.65 tons/m³

	CONTAMINATED	CLEAN
MASS TOTAL	0.23 tons	90.2 tons
MAXIMUM/SORT	4.4 kg	58.2 kg
MINIMUM/SORT	0.7 kg	53.9 kg

WEIGHT RECOVERY OR VOLUME RECOVERY		99.8%
EQUIVALENT SOIL-IN-GROUND	0.18 yd ³	71.5 yd ³ 71.7 yd ³ /day

PARTICLE ACTIVITY (MAXIMUM ESTIMATE)

TOTAL	4,150 kBq
MAXIMUM/SORT	312 kBq
MINIMUM/SORT	3.5 kBq

DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY	1,450 kBq	3,136 kBq
MAXIMUM/SORT	190 kBq	12 kBq
MINIMUM/SORT	0 Bq	-7 kBq
SPECIFIC ACTIVITY	6,428 Bq/kg	35 Bq/kg

WORK HISTORY

WORK DAY START	05:00 AM	WORK DAY END	03:30 PM
PLANT START-UP	05:00 AM	PLANT SHUT-DOWN	03:30 PM
START SOIL PROCESSING	05:39 AM	END SOIL PROCESSING	03:12 PM
LUNCH START	11:30 AM	LUNCH PERIOD	0.5 hr

WORK HOURS	10.0 hr
AVAILABLE HOURS	10.0 hr
ACTUAL PROCESS HOURS (total 20-sec records)	8.63 hr
DOWN-TIME	1.37 hr
TOTAL SYSTEM PAUSE	0.89 hr
NONAVAILABLE HOURS	0.0 hr
START-UP	0.66 hr
SHUT-DOWN	0.30 hr
PLANT PERFORMANCE	86.3%
PRODUCTIVITY	86.3%

TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 1,783

NONPROCESS RECORDS (Test, calibration, etc) 11

20-SEC PROCESS RECORDS 1,553

TOTAL SORT	0 MD>0 & MND=0
NO SORT	1,382 AD=0 & MD=0 & MND>0
SOME SORT	171 AD>0&0<MD<MNDmax&MND<MNDmax
UNEXPLAINED RECORDS	0

0<AD<1kBq & MD>0	1	UNEXPLAIN	PAUSE
AD=0 & MD	0	TIME	TIME
AD<0 & MD	0	11:09:54	11:32
ACT_P <5 kBq	48 20.9%		

JA SOIL CLEANUP PLANT LOG SUMMARY

2-SEC COUNT PERIODS 15,530
 2-SEC RECORDS WITH SORTS 230 (ACT_P >0 kBq)
 2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR
 2 DETECTORS 51 89.5%
 3 DETECTORS 6 10.5%
 4 DETECTORS 0 0.0%
 5 DETECTORS 0 0.0%
 6 DETECTORS 0 0.0%
 7 DETECTORS 0 0.0%
 8 DETECTORS 0 0.0%
 TOTAL 57
 NET 2-SEC RECORDS WITH SORTS 173
 2-SEC PERIODS WITH NO SORTS 15,357
 AVG TIME BETWEEN 2-SEC SORTS 179.5 sec

1-GATE SORTS		125	ACT_NO	NUMBER	SPEC_A	ACT_P	SORT FREQ%		ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)		(kBq)
1	1	0.8%	-14000	0	-241	4000	13	5.7%	4
2	7	5.6%	-12000	1	-206	8000	98	42.6%	8
3	13	10.4%	-10000	1	-172	12000	40	17.4%	12
4	18	14.4%	-8000	2	-137	16000	18	7.8%	16
5	30	24.0%	-6000	4	-103	20000	18	7.8%	20
6	28	22.4%	-4000	25	-69	24000	7	3.0%	24
7	20	16.0%	-2000	106	-34	28000	5	2.2%	28
8	8	6.4%	0	231	0	32000	2	0.9%	32
TOTAL	125		2000	414	34	36000	1	0.4%	36
			4000	417	69	40000	0	0.0%	40
2-GATE SORTS		105	6000	248	103	44000	1	0.4%	44
DETECTR	SORTS	FREQ%	8000	93	137	48000	4	1.7%	48
8			10000	19	172	52000	2	0.9%	52
9	2	1.9%	12000	2	206	56000	2	0.9%	56
10	9	8.6%	14000	1	241	60000	7	3.0%	60
11	10	9.5%	16000	0	275	64000	1	0.4%	64
12	21	20.0%	18000	0	309	68000	1	0.4%	68
13	33	31.4%	20000	0	344	72000	2	0.9%	72
14	17	16.2%	22000	0	378	76000	2	0.9%	76
15	13	12.4%	24000	0	412	80000	1	0.4%	80
TOTAL	105		26000	0	447	84000	2	0.9%	84
			>28000	0	0	>84000	3	1.3%	>84
			TOTAL	1564		TOTAL	230		

SUMMARY TOTALS

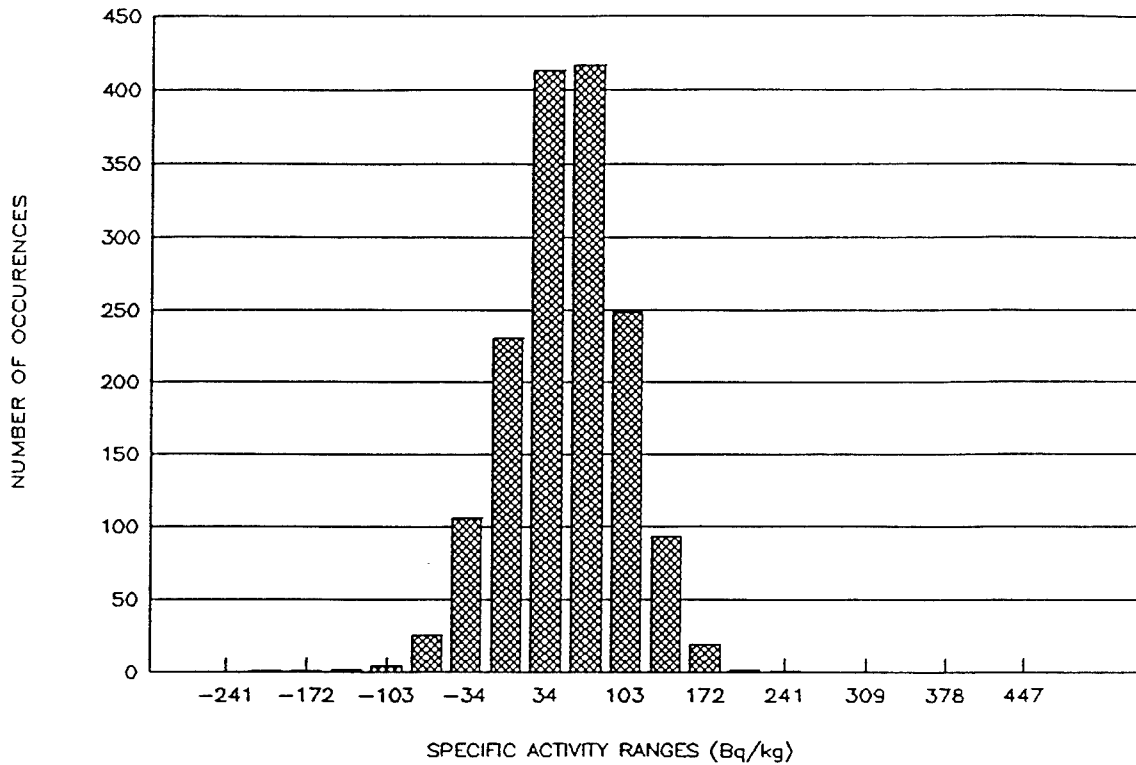
HOT PARTICLE EVENTS	223	SORTS BY ONE GATE ONLY	125
MULTIPARTICLE EVENTS	85	SORTS BY TWO GATES	105
DISTRIBUTED EVENTS	0		

REC CODE EXPLANATION

1.00 Source check (Soil on belt)
 2.00 Empty belt
 3.00 Test (No process soil)

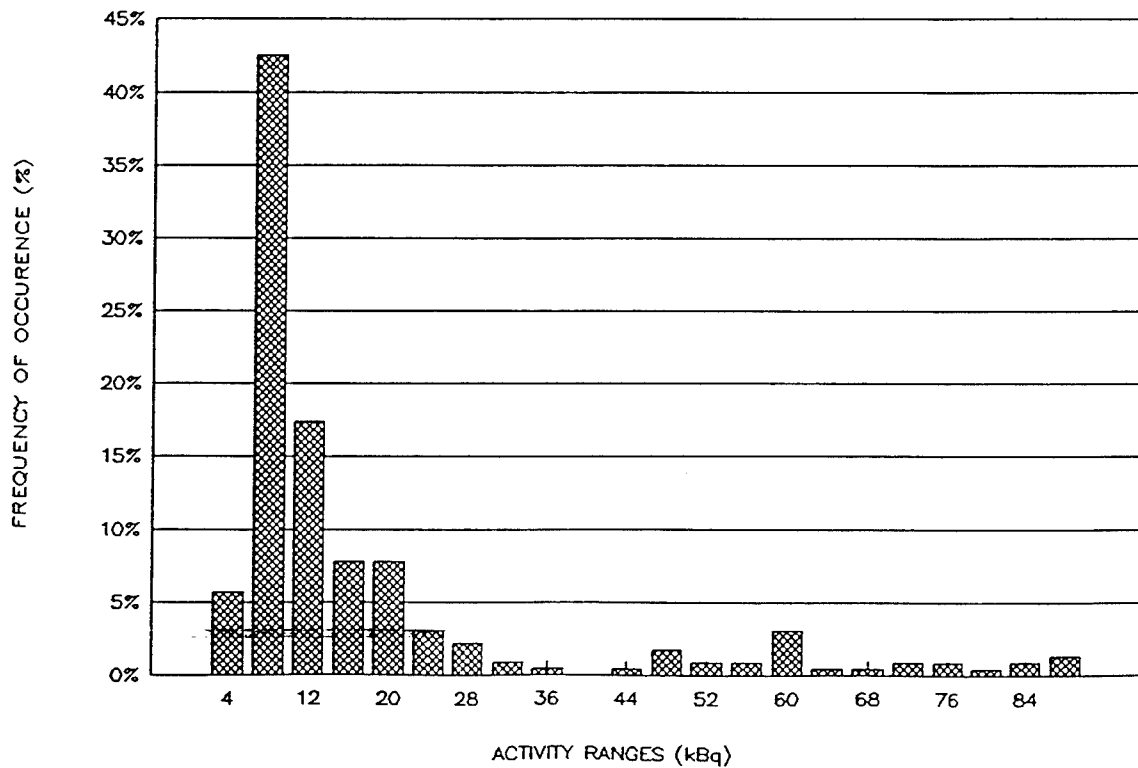
CLEAN SOIL SPECIFIC ACTIVITY

SORTER 1 LOG DATA FOR 26-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 26-Jul-93



JA SOIL CLEANUP PLANT LOG SUMMARY

SORTER 2 26-Jul-93

AVERAGE BACKGROUND COUNT RATE	0.78 ± 0.04 c/sec		
SORTER SOIL DENSITY	1.3 tons/m ³		
GROUND SOIL DENSITY	1.65 tons/m ³		
		CONTAMINATED	CLEAN
MASS TOTAL		0.21 tons	89.8 tons
MAXIMUM/SORT		3.6 kg	58.3 kg
MINIMUM/SORT		0.7 kg	54.6 kg
WEIGHT RECOVERY OR VOLUME RECOVERY			99.8%
EQUIVALENT SOIL-IN-GROUND	0.17 yd ³	71.2 yd ³	71.3 yd ³ /day
PARTICLE ACTIVITY (MAXIMUM ESTIMATE)			
TOTAL	4,597 kBq		
MAXIMUM/SORT	297 kBq		
MINIMUM/SORT	3.7 kBq		
DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY	1,557 kBq	1,358 kBq	
MAXIMUM/SORT	161 kBq	11 kBq	
MINIMUM/SORT	0 Bq	-11 kBq	
SPECIFIC ACTIVITY	7,243 Bq/kg	15 Bq/kg	
WORK HISTORY			
WORK DAY START	05:00 AM	WORK DAY END	03:30 PM
PLANT START-UP	05:00 AM	PLANT SHUT-DOWN	03:30 PM
START SOIL PROCESSING	05:40 AM	END SOIL PROCESSING	03:10 PM
LUNCH START	11:30 AM	LUNCH PERIOD	0.5 hr
WORK HOURS		10.0 hr	
AVAILABLE HOURS		10.0 hr	
ACTUAL PROCESS HOURS (total 20-sec records)		8.58 hr	
DOWN-TIME		1.42 hr	
TOTAL SYSTEM PAUSE		0.90 hr	
NONAVAILABLE HOURS		0.0 hr	
START-UP		0.68 hr	
SHUT-DOWN		0.33 hr	
PLANT PERFORMANCE		85.8%	
PRODUCTIVITY		85.8%	
TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)		1,752	
NONPROCESS RECORDS (Test, calibration, etc)		19	
20-SEC PROCESS RECORDS		1,544	
TOTAL SORT		0 MD>0 & MND=0	
NO SORT		1,380 AD=0 & MD=0 & MND>0	
SOME SORT		164 AD>0&0<MD<MNDmax&MND<MNDmax	
UNEXPLAINED RECORDS		0	
0<AD<1kBq & MD>0	1		UNEXPLAIN PAUSE
AD=0 & MD	0		TIME TIME
AD<0 & MD	0		14:00:31 08:59
ACT_P <5 kBq	16	7.7%	11:32

JA SOIL CLEANUP PLANT LOG SUMMARY

2-SEC COUNT PERIODS 15,440
 2-SEC RECORDS WITH SORTS 208 (ACT_P >0 kBq)
 2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR

2 DETECTORS	47	85.5%
3 DETECTORS	6	10.9%
4 DETECTORS	2	3.6%
5 DETECTORS	0	0.0%
6 DETECTORS	0	0.0%
7 DETECTORS	0	0.0%
8 DETECTORS	0	0.0%
TOTAL	55	

NET 2-SEC RECORDS WITH SORTS 153
 2-SEC PERIODS WITH NO SORTS 15,287
 AVG TIME BETWEEN 2-SEC SORTS 201.8 sec

1-GATE SORTS DETECTR	SORTS	105 FREQ%	ACT_ND (Bq)	NUMBER (#)	SPEC_A (Bq/kg)	ACT_P (Bq)	SORT (#)	FREQ%	ACT_P (kBq)
1	3	2.9%	-14000	2	-240	4000	3	1.4%	4
2	16	15.2%	-12000	3	-206	8000	71	34.1%	8
3	17	16.2%	-10000	2	-172	12000	43	20.7%	12
4	23	21.9%	-8000	3	-137	16000	23	11.1%	16
5	22	21.0%	-6000	14	-103	20000	9	4.3%	20
6	13	12.4%	-4000	55	-69	24000	10	4.8%	24
7	10	9.5%	-2000	181	-34	28000	7	3.4%	28
8	1	1.0%	0	346	0	32000	4	1.9%	32
TOTAL	105		2000	444	34	36000	2	1.0%	36
			4000	299	69	40000	3	1.4%	40
2-GATE SORTS		103	6000	141	103	44000	3	1.4%	44
DETECTR	SORTS	FREQ%	8000	58	137	48000	3	1.4%	48
8			10000	14	172	52000	1	0.5%	52
9	10	9.7%	12000	1	206	56000	6	2.9%	56
10	15	14.6%	14000	0	240	60000	4	1.9%	60
11	21	20.4%	16000	0	274	64000	1	0.5%	64
12	24	23.3%	18000	0	309	68000	2	1.0%	68
13	18	17.5%	20000	0	343	72000	0	0.0%	72
14	9	8.7%	22000	0	377	76000	4	1.9%	76
15	6	5.8%	24000	0	412	80000	1	0.5%	80
TOTAL	103		26000	0	446	84000	0	0.0%	84
			>28000	0	0	>84000	8	3.8%	>84
			TOTAL	1563		TOTAL	208		

SUMMARY TOTALS

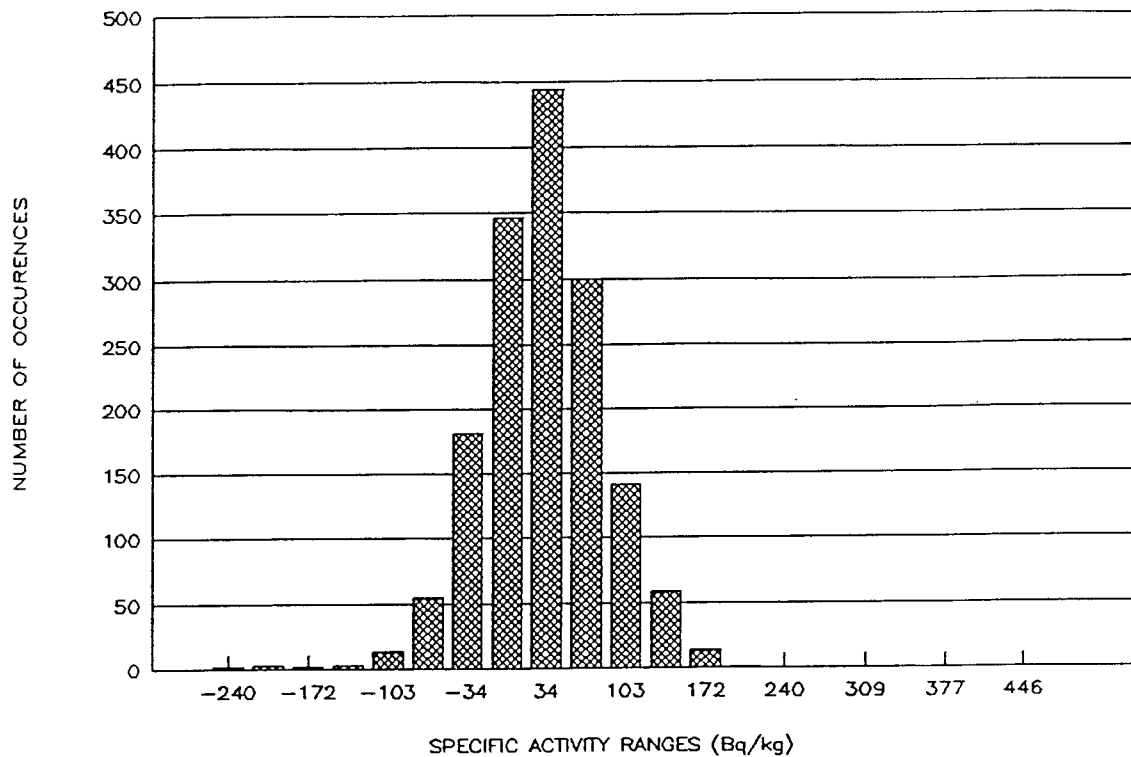
HOT PARTICLE EVENTS	208	SORTS BY ONE GATE ONLY	105
MULTIPARTICLE EVENTS	87	SORTS BY TWO GATES	103
DISTRIBUTED EVENTS	0		

REC CODE EXPLANATION

1.00 Source check (Soil on belt)
 2.00 Empty belt
 3.00 Test (No process soil)

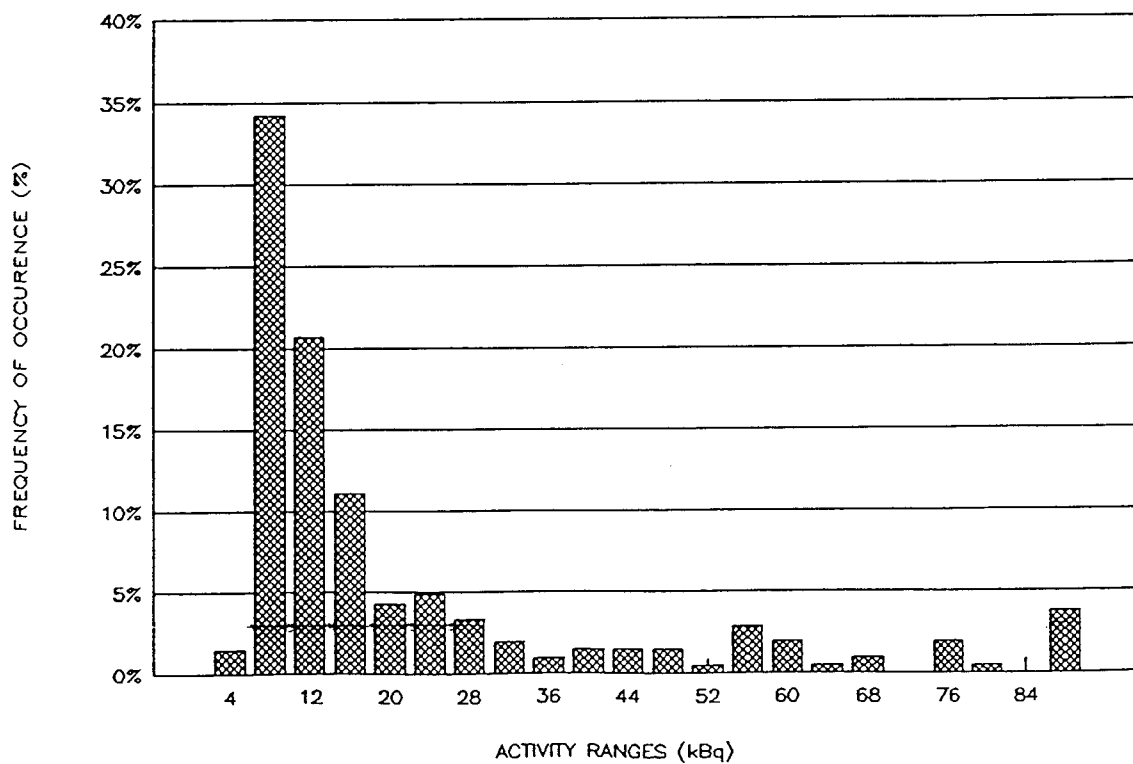
CLEAN SOIL SPECIFIC ACTIVITY

SORTER 2 LOG DATA FOR 26-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 26-Jul-93



JA SOIL CLEANUP PLANT LOG SUMMARY

SORTER 1 27-Jul-93

AVERAGE BACKGROUND COUNT RATE 0.74 ± 0.04 c/sec
 SORTER SOIL DENSITY 1.3 tons/m³
 GROUND SOIL DENSITY 1.65 tons/m³

	CONTAMINATED	CLEAN
MASS TOTAL	0.23 tons	81.5 tons
MAXIMUM/SORT	3.6 kg	58.2 kg
MINIMUM/SORT	0.7 kg	54.6 kg

WEIGHT RECOVERY OR VOLUME RECOVERY		99.7%
EQUIVALENT SOIL-IN-GROUND	0.18 yd ³	64.6 yd ³ 64.8 yd ³ /day

PARTICLE ACTIVITY (MAXIMUM ESTIMATE)

TOTAL	3,856 kBq
MAXIMUM/SORT	128 kBq
MINIMUM/SORT	3.2 kBq

DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY	1,323 kBq	(749)kBq
MAXIMUM/SORT	73 kBq	9 kBq
MINIMUM/SORT	0 Bq	-11 kBq
SPECIFIC ACTIVITY	5,701 Bq/kg	(9)Bq/kg

WORK HISTORY

WORK DAY START	05:00 AM	WORK DAY END	03:30 PM
PLANT START-UP	05:00 AM	PLANT SHUT-DOWN	03:30 PM
START SOIL PROCESSING	05:21 AM	END SOIL PROCESSING	03:17 PM
LUNCH START	11:30 AM	LUNCH PERIOD	0.5 hr

WORK HOURS	10.0 hr
AVAILABLE HOURS	10.0 hr
ACTUAL PROCESS HOURS (total 20-sec records)	7.80 hr
DOWN-TIME	2.20 hr
TOTAL SYSTEM PAUSE	2.07 hr
NONAVAILABLE HOURS	0.0 hr
START-UP	0.36 hr
SHUT-DOWN	0.22 hr
PLANT PERFORMANCE	78.0%
PRODUCTIVITY	78.0%

TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)

1,627

NONPROCESS RECORDS (Test, calibration, etc)

30

20-SEC PROCESS RECORDS

1,404

TOTAL SORT	0 MD>0 & MND=0
NO SORT	1,239 AD=0 & MD=0 & MND>0
SOME SORT	165 AD>0&0<MD<MNDmax&MND<MNDmax
UNEXPLAINED RECORDS	0
0<AD<1kBq & MD>0	1
AD=0 & MD	0
AD<0 & MD	0
ACT_P <5 kBq	34 15.2%

UNEXPLAIN	PAUSE
TIME	TIME
15:07:01	08:56
	09:57

JA SOIL CLEANUP PLANT LOG SUMMARY

2-SEC COUNT PERIODS

14,040

11:27

2-SEC RECORDS WITH SORTS

223 (ACT_P >0 kBq)

15:00

2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR

2 DETECTORS	53	88.3%
3 DETECTORS	6	10.0%
4 DETECTORS	1	1.7%
5 DETECTORS	0	0.0%
6 DETECTORS	0	0.0%
7 DETECTORS	0	0.0%
8 DETECTORS	0	0.0%

TOTAL 60

NET 2-SEC RECORDS WITH SORTS 163

2-SEC PERIODS WITH NO SORTS 13,877

AVG TIME BETWEEN 2-SEC SORTS 172.3 sec

1-GATE SORTS		108	ACT_ND	NUMBER	SPEC_A	ACT_P	SORT FREQ%		ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)		(kBq)
1	1	0.9%	-14000	3	-241	4000	7	3.1%	4
2	9	8.3%	-12000	5	-206	8000	95	42.6%	8
3	19	17.6%	-10000	11	-172	12000	33	14.8%	12
4	17	15.7%	-8000	16	-137	16000	25	11.2%	16
5	23	21.3%	-6000	35	-103	20000	11	4.9%	20
6	17	15.7%	-4000	118	-69	24000	4	1.8%	24
7	16	14.8%	-2000	261	-34	28000	9	4.0%	28
8	6	5.6%	0	381	0	32000	6	2.7%	32
TOTAL	108		2000	343	34	36000	3	1.3%	36
			4000	175	69	40000	1	0.4%	40
2-GATE SORTS		115	6000	68	103	44000	2	0.9%	44
DETECTR	SORTS	FREQ%	8000	16	137	48000	3	1.3%	48
8			10000	2	172	52000	4	1.8%	52
9	4	3.5%	12000	0	206	56000	3	1.3%	56
10	14	12.2%	14000	0	241	60000	8	3.6%	60
11	27	23.5%	16000	0	275	64000	2	0.9%	64
12	21	18.3%	18000	0	309	68000	0	0.0%	68
13	25	21.7%	20000	0	344	72000	2	0.9%	72
14	12	10.4%	22000	0	378	76000	1	0.4%	76
15	12	10.4%	24000	0	412	80000	0	0.0%	80
TOTAL	115		26000	0	447	84000	1	0.4%	84
			>28000	0	0	>84000	3	1.3%	>84
			TOTAL	1434		TOTAL	223		

SUMMARY TOTALS

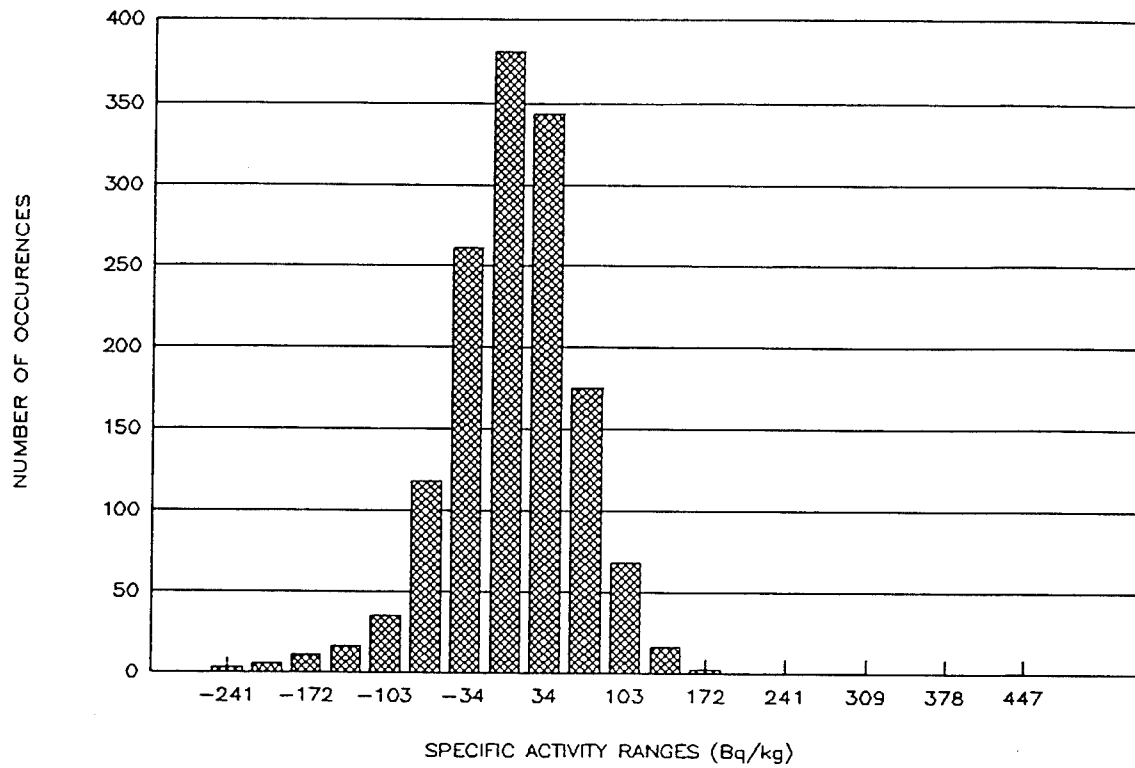
HOT PARTICLE EVENTS	232	SORTS BY ONE GATE ONLY	108
MULTIPARTICLE EVENTS	86	SORTS BY TWO GATES	115
DISTRIBUTED EVENTS	0		

REC CODE EXPLANATION

1.00 Source check (Soil on belt)
 2.00 Empty belt
 3.00 Test (No process soil)

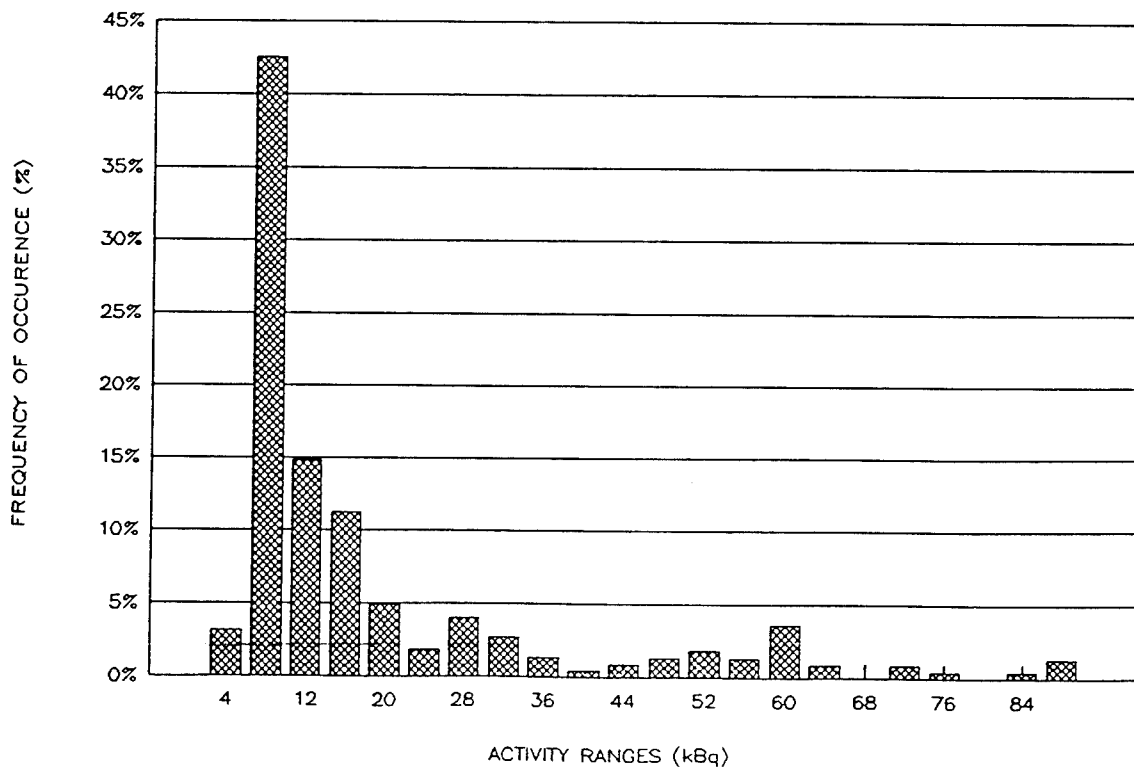
CLEAN SOIL SPECIFIC ACTIVITY

SORTER 1 LOG DATA FOR 27-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 27-Jul-93



JA SOIL CLEANUP PLANT LOG SUMMARY

SORTER 2 27-Jul-93

AVERAGE BACKGROUND COUNT RATE 0.77 ± 0.04 c/sec
 SORTER SOIL DENSITY 1.3 tons/m³
 GROUND SOIL DENSITY 1.65 tons/m³

	CONTAMINATED	CLEAN
MASS TOTAL	0.26 tons	82.9 tons
MAXIMUM/SORT	7.3 kg	58.3 kg
MINIMUM/SORT	0.7 kg	51 kg

WEIGHT RECOVERY OR VOLUME RECOVERY		99.7%
EQUIVALENT SOIL-IN-GROUND	0.21 yd ³	65.7 yd ³ 65.9 yd ³ /day

PARTICLE ACTIVITY (MAXIMUM ESTIMATE)

TOTAL	14,097 kBq
MAXIMUM/SORT	4,469 kBq
MINIMUM/SORT	3.0 kBq

DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY	4,524 kBq	1,126 kBq
MAXIMUM/SORT	2631 kBq	18 kBq
MINIMUM/SORT	0 Bq	-14 kBq
SPECIFIC ACTIVITY	17,220 Bq/kg	14 Bq/kg

WORK HISTORY

WORK DAY START	05:00 AM	WORK DAY END	03:30 PM
PLANT START-UP	05:00 AM	PLANT SHUT-DOWN	03:30 PM
START SOIL PROCESSING	05:21 AM	END SOIL PROCESSING	03:21 PM
LUNCH START	11:30 AM	LUNCH PERIOD	0.5 hr

WORK HOURS	10.0 hr
AVAILABLE HOURS	10.0 hr
ACTUAL PROCESS HOURS (total 20-sec records)	7.93 hr
DOWN-TIME	2.07 hr
TOTAL SYSTEM PAUSE	2.06 hr
NONAVAILABLE HOURS	0.0 hr
START-UP	0.36 hr
SHUT-DOWN	0.15 hr
PLANT PERFORMANCE	79.3%
PRODUCTIVITY	79.3%

TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 1,676
 NONPROCESS RECORDS (Test, calibration, etc) 8

20-SEC PROCESS RECORDS 1,427

TOTAL SORT	0 MD>0 & MND=0
NO SORT	1,242 AD=0 & MD=0 & MND>0
SOME SORT	185 AD>0&0<MD<MNDmax&MND<MNDmax
UNEXPLAINED RECORDS	0

0<AD<1kBq & MD>0	0	UNEXPLAIN	PAUSE
AD=0 & MD	0	TIME	TIME
AD<0 & MD	0	None	08:56
ACT_P <5 kBq	34 13.7%		09:57

JA SOIL CLEANUP PLANT LOG SUMMARY

2-SEC COUNT PERIODS

14,270

11:27

2-SEC RECORDS WITH SORTS

249 (ACT_P >0 kBq)

2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR

2 DETECTORS	67	77.9%
3 DETECTORS	12	14.0%
4 DETECTORS	4	4.7%
5 DETECTORS	3	3.5%
6 DETECTORS	0	0.0%
7 DETECTORS	0	0.0%
8 DETECTORS	0	0.0%

TOTAL 86

NET 2-SEC RECORDS WITH SORTS

163

2-SEC PERIODS WITH NO SORTS

14,107

AVG TIME BETWEEN 2-SEC SORTS

175.1 sec

1-GATE SORTS DETECTR	SORTS	125 FREQ%	ACT_NO (Bq)	NUMBER (#)	SPEC_A (Bq/kg)	ACT_P (Bq)	SORT (#)	FREQ%	ACT_P (kBq)
1	4	3.2%	-14000	0	-240	4000	14	5.6%	4
2	12	9.6%	-12000	4	-206	8000	82	32.9%	8
3	16	12.8%	-10000	1	-172	12000	46	18.5%	12
4	28	22.4%	-8000	13	-137	16000	31	12.4%	16
5	25	20.0%	-6000	64	-103	20000	13	5.2%	20
6	26	20.8%	-4000	156	-69	24000	5	2.0%	24
7	13	10.4%	-2000	234	-34	28000	7	2.8%	28
8	1	0.8%	0	197	0	32000	2	0.8%	32
TOTAL	125		2000	171	34	36000	6	2.4%	36
			4000	178	69	40000	3	1.2%	40
2-GATE SORTS		124	6000	208	103	44000	0	0.0%	44
DETECTR	SORTS	FREQ%	8000	131	137	48000	2	0.8%	48
8			10000	60	172	52000	3	1.2%	52
9	8	6.5%	12000	13	206	56000	3	1.2%	56
10	11	8.9%	14000	3	240	60000	2	0.8%	60
11	24	19.4%	16000	1	274	64000	3	1.2%	64
12	24	19.4%	18000	0	309	68000	1	0.4%	68
13	27	21.8%	20000	1	343	72000	3	1.2%	72
14	21	16.9%	22000	0	377	76000	5	2.0%	76
15	9	7.3%	24000	0	412	80000	2	0.8%	80
TOTAL	124		26000	0	446	84000	1	0.4%	84
			>28000	0	0	>84000	15	6.0%	>84
			TOTAL	1435		TOTAL	249		

SUMMARY TOTALS

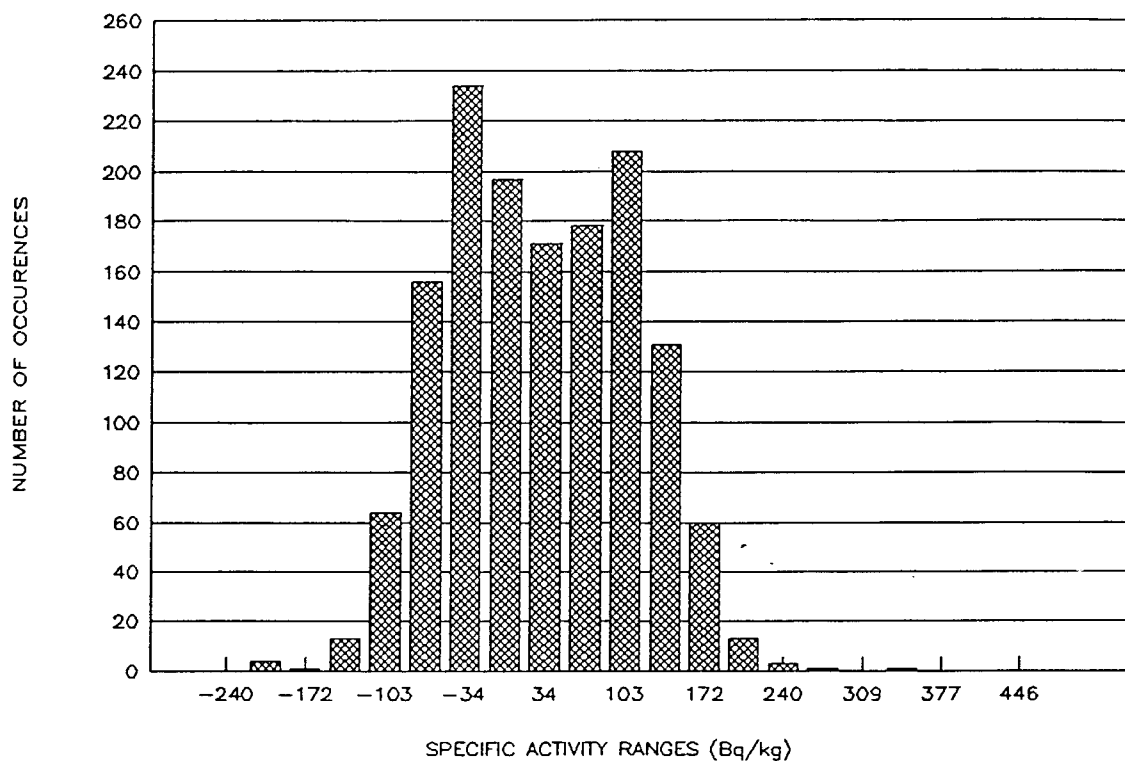
HOT PARTICLE EVENTS	239	SORTS BY ONE GATE ONLY	125
MULTIPARTICLE EVENTS	122	SORTS BY TWO GATES	124
DISTRIBUTED EVENTS	0		

REC CODE EXPLANATION

1.00 Source check (Soil on belt)
 2.00 Empty belt
 3.00 Test (No process soil)

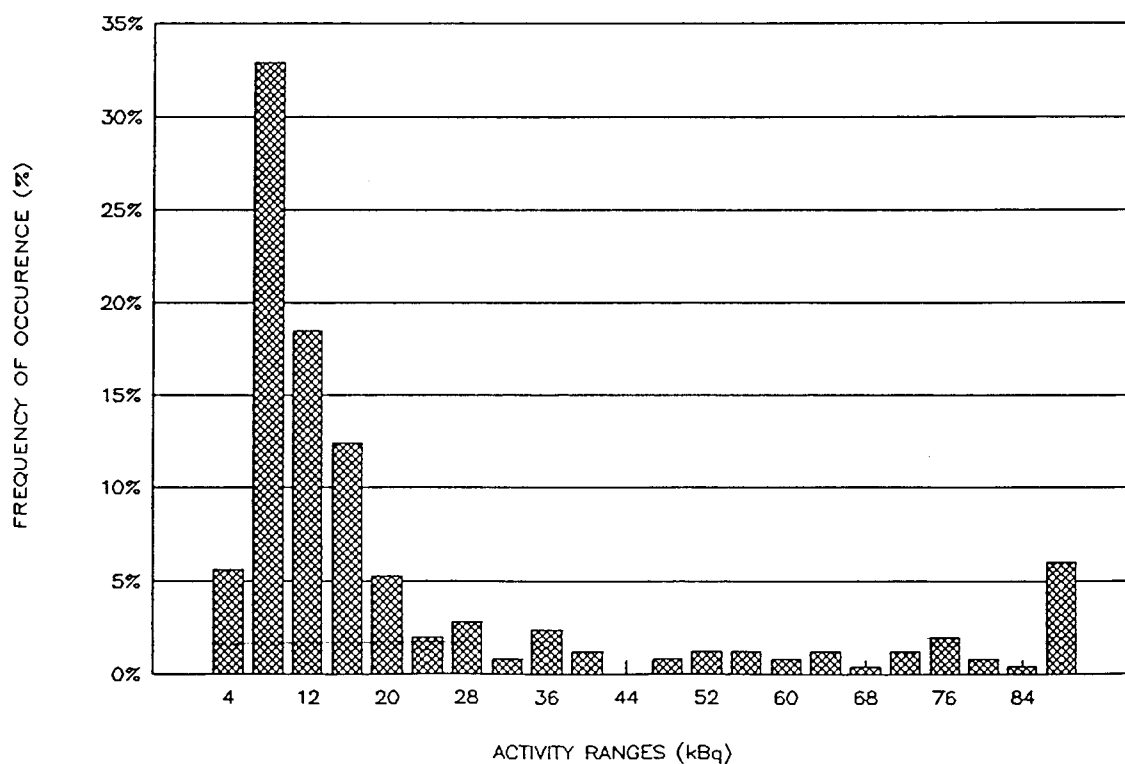
CLEAN SOIL SPECIFIC ACTIVITY

SORTER 2 LOG DATA FOR 27-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 27-Jul-93



JA SOIL CLEANUP PLANT LOG SUMMARY

SORTER 1 28-Jul-93

AVERAGE BACKGROUND COUNT RATE 0.76 ± 0.05 c/sec
 SORTER SOIL DENSITY 1.3 tons/m³
 GROUND SOIL DENSITY 1.65 tons/m³

	CONTAMINATED	CLEAN
MASS TOTAL	0.28 tons	89.1 tons
MAXIMUM/SORT	4.4 kg	58.2 kg
MINIMUM/SORT	0.7 kg	53.9 kg

WEIGHT RECOVERY OR VOLUME RECOVERY		99.7%
EQUIVALENT SOIL-IN-GROUND	0.22 yd³	70.6 yd³ 70.8 yd³/day

PARTICLE ACTIVITY (MAXIMUM ESTIMATE)

TOTAL	5,591 kBq
MAXIMUM/SORT	229 kBq
MINIMUM/SORT	3.1 kBq

DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY	1,904 kBq	(730)kBq
MAXIMUM/SORT	154 kBq	11 kBq
MINIMUM/SORT	0 Bq	-10 kBq
SPECIFIC ACTIVITY	6,798 Bq/kg	(8)Bq/kg

WORK HISTORY

WORK DAY START	05:00 AM	WORK DAY END	03:30 PM
PLANT START-UP	05:00 AM	PLANT SHUT-DOWN	03:30 PM
START SOIL PROCESSING	05:27 AM	END SOIL PROCESSING	03:11 PM
LUNCH START	11:30 AM	LUNCH PERIOD	0.5 hr

WORK HOURS	10.0 hr
AVAILABLE HOURS	10.0 hr
ACTUAL PROCESS HOURS (total 20-sec records)	8.53 hr
DOWN-TIME	1.47 hr
TOTAL SYSTEM PAUSE	1.14 hr
NONAVAILABLE HOURS	0.0 hr
START-UP	0.47 hr
SHUT-DOWN	0.31 hr
PLANT PERFORMANCE	85.3%
PRODUCTIVITY	85.3%

TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)	1,811
NONPROCESS RECORDS (Test, calibration, etc)	17

20-SEC PROCESS RECORDS	1,535
TOTAL SORT	0 MD>0 & MND=0
NO SORT	1,326 AD=0 & MD=0 & MND>0
SOME SORT	209 AD>0&0<MD<MNDmax&MND<MNDmax
UNEXPLAINED RECORDS	0

0<AD<1kBq & MD>0	0	UNEXPLAIN	PAUSE
AD=0 & MD	0	TIME	TIME
AD<0 & MD	0	None	11:23
ACT_P <5 kBq	57	20.7%	

JA SOIL CLEANUP PLANT LOG SUMMARY

2-SEC COUNT PERIODS 15,350
 2-SEC RECORDS WITH SORTS 276 (ACT_P >0 kBq)
 2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR
 2 DETECTORS 66 84.6%
 3 DETECTORS 9 11.5%
 4 DETECTORS 3 3.8%
 5 DETECTORS 0 0.0%
 6 DETECTORS 0 0.0%
 7 DETECTORS 0 0.0%
 8 DETECTORS 0 0.0%
 TOTAL 78
 NET 2-SEC RECORDS WITH SORTS 198
 2-SEC PERIODS WITH NO SORTS 15,152
 AVG TIME BETWEEN 2-SEC SORTS 155.1 sec

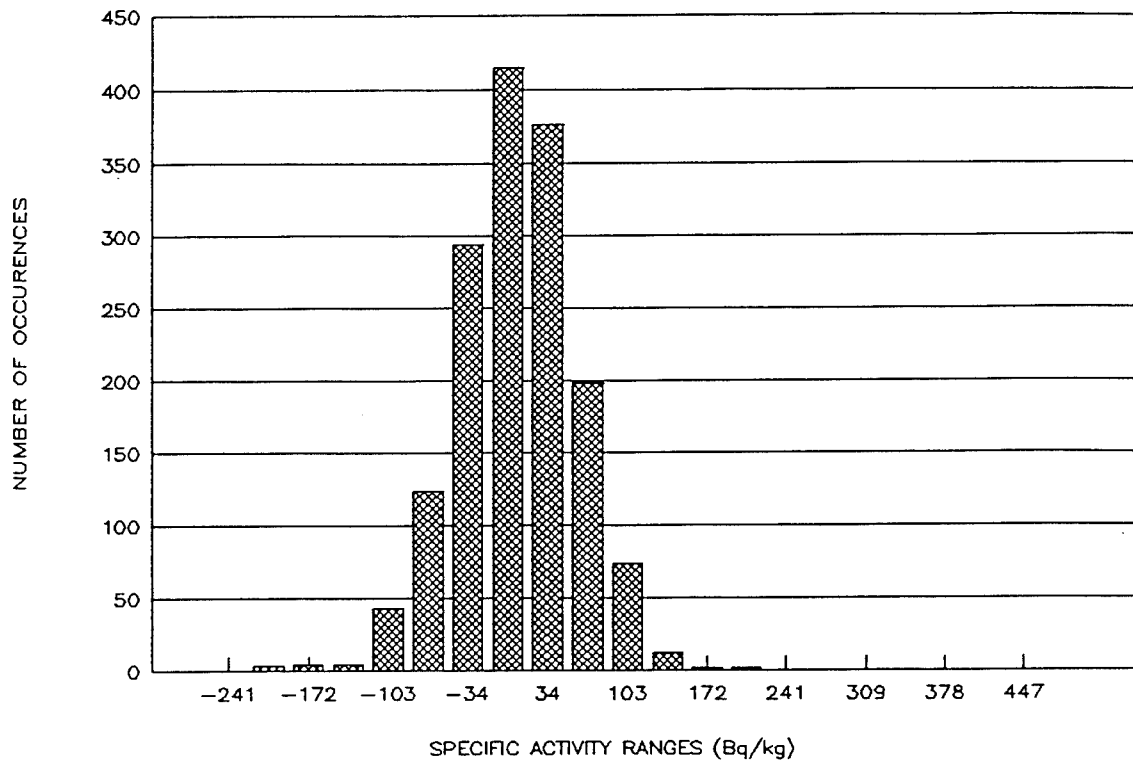
1-GATE SORTS		139	ACT_NO	NUMBER	SPEC_A	ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)		(kBq)
1	2	1.4%	-14000	0	-241	4000	15	5.4%	4
2	15	10.8%	-12000	3	-206	8000	115	41.7%	8
3	18	12.9%	-10000	4	-172	12000	50	18.1%	12
4	30	21.6%	-8000	4	-137	16000	22	8.0%	16
5	36	25.9%	-6000	43	-103	20000	7	2.5%	20
6	22	15.8%	-4000	124	-69	24000	12	4.3%	24
7	16	11.5%	-2000	294	-34	28000	5	1.8%	28
8	0	0.0%	0	415	0	32000	5	1.8%	32
TOTAL	139		2000	377	34	36000	3	1.1%	36
			4000	198	69	40000	2	0.7%	40
2-GATE SORTS		137	6000	74	103	44000	0	0.0%	44
DETECTR	SORTS	FREQ%	8000	12	137	48000	2	0.7%	48
8			10000	2	172	52000	4	1.4%	52
9	4	2.9%	12000	2	206	56000	5	1.8%	56
10	20	14.6%	14000	0	241	60000	5	1.8%	60
11	21	15.3%	16000	0	275	64000	6	2.2%	64
12	36	26.3%	18000	0	309	68000	2	0.7%	68
13	28	20.4%	20000	0	344	72000	2	0.7%	72
14	18	13.1%	22000	0	378	76000	1	0.4%	76
15	10	7.3%	24000	0	412	80000	2	0.7%	80
TOTAL	137		26000	0	447	84000	0	0.0%	84
			>28000	0	0	>84000	11	4.0%	>84
			TOTAL	1552		TOTAL	276		
SUMMARY TOTALS									
HOT PARTICLE EVENTS			269	SORTS BY ONE GATE ONLY			139		
MULTIPARTICLE EVENTS			115	SORTS BY TWO GATES			137		
DISTRIBUTED EVENTS			0						

REC CODE EXPLANATION

1.00 Source check (Soil on belt)
 2.00 Empty belt
 3.00 Test (No process soil)

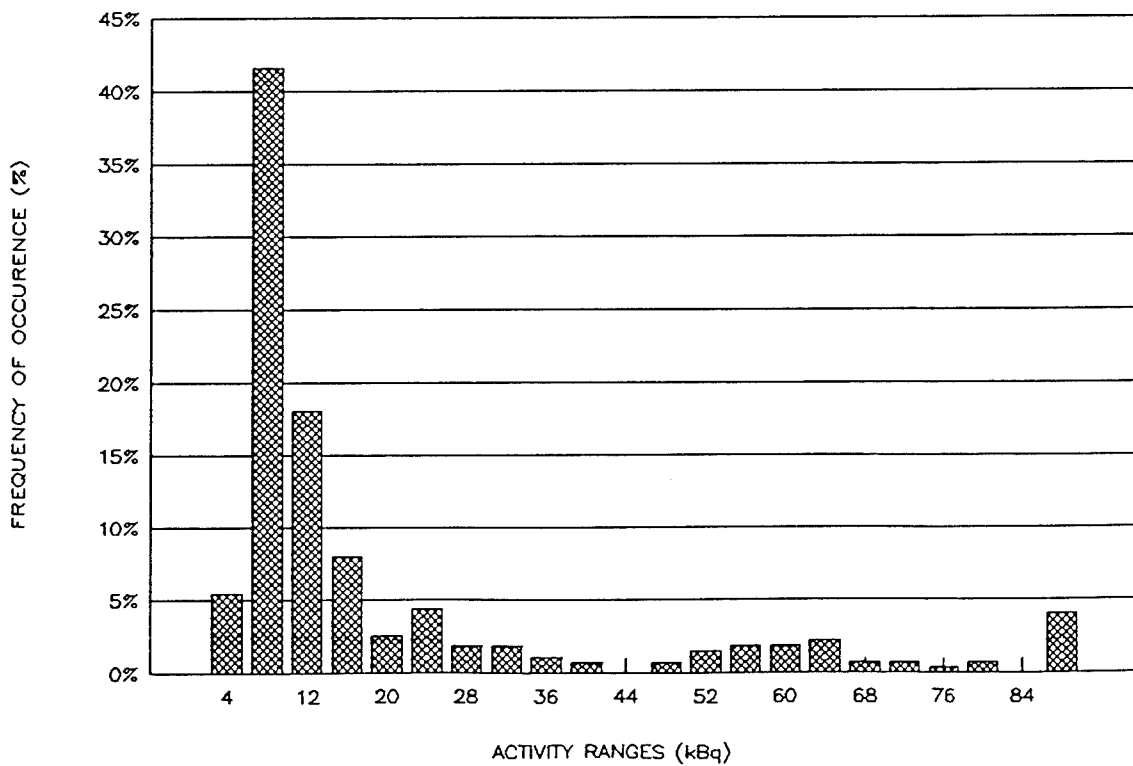
CLEAN SOIL SPECIFIC ACTIVITY

SORTER 1 LOG DATA FOR 28-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 28-Jul-93



JA SOIL CLEANUP PLANT LOG SUMMARY

SORTER 2 28-Jul-93

AVERAGE BACKGROUND COUNT RATE	0.80	±	0.00 c/sec		
SORTER SOIL DENSITY	1.3	tons/m ³			
GROUND SOIL DENSITY	1.65	tons/m ³			
			CONTAMINATED	CLEAN	
MASS TOTAL			0.28 tons	89.0 tons	
MAXIMUM/SORT			5.1 kg	58.3 kg	
MINIMUM/SORT			0.7 kg	53.2 kg	
WEIGHT RECOVERY OR VOLUME RECOVERY					99.7%
EQUIVALENT SOIL-IN-GROUND			0.22 yd ³	70.6 yd ³	70.8 yd ³ /day
PARTICLE ACTIVITY (MAXIMUM ESTIMATE)					
TOTAL			6,171 kBq		
MAXIMUM/SORT			894 kBq		
MINIMUM/SORT			3.3 kBq		
DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY					
MAXIMUM/SORT			2,118 kBq	5,455 kBq	
MINIMUM/SORT			500 kBq	14 kBq	
SPECIFIC ACTIVITY			0 Bq	-5 kBq	
			7,645 Bq/kg	61 Bq/kg	
WORK HISTORY					
WORK DAY START	05:00 AM		WORK DAY END	03:30 PM	
PLANT START-UP	05:00 AM		PLANT SHUT-DOWN	03:30 PM	
START SOIL PROCESSING	05:28 AM		END SOIL PROCESSING	03:11 PM	
LUNCH START	11:30 AM		LUNCH PERIOD	0.5 hr	
WORK HOURS			10.0 hr		
AVAILABLE HOURS			10.0 hr		
ACTUAL PROCESS HOURS (total 20-sec records)			8.51 hr		
DOWN-TIME			1.49 hr		
TOTAL SYSTEM PAUSE			1.14 hr		
NONAVAILABLE HOURS			0.0 hr		
START-UP			0.48 hr		
SHUT-DOWN			0.31 hr		
PLANT PERFORMANCE			85.1%		
PRODUCTIVITY			85.1%		
TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)			1,763		
NONPROCESS RECORDS (Test, calibration, etc)			20		
20-SEC PROCESS RECORDS			1,532		
TOTAL SORT			0 MD>0 & MND=0		
NO SORT			1,310 AD=0 & MD=0 & MND>0		
SOME SORT			222 AD>0&0<MD<MNDmax&MND<MNDmax		
UNEXPLAINED RECORDS			0		
0<AD<1kBq & MD>0	0			UNEXPLAIN	PAUSE
AD=0 & MD	0			TIME	TIME
AD<0 & MD	0			None	11:23
ACT_P <5 kBq	32	13.9%			

JA SOIL CLEANUP PLANT LOG SUMMARY

2-SEC COUNT PERIODS 15,320
 2-SEC RECORDS WITH SORTS 231 (ACT_P >0 kBq)
 2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR

2 DETECTORS	56	81.2%
3 DETECTORS	12	17.4%
4 DETECTORS	1	1.4%
5 DETECTORS	0	0.0%
6 DETECTORS	0	0.0%
7 DETECTORS	0	0.0%
8 DETECTORS	0	0.0%
TOTAL	69	

NET 2-SEC RECORDS WITH SORTS 162
 2-SEC PERIODS WITH NO SORTS 15,158
 AVG TIME BETWEEN 2-SEC SORTS 189.1 sec

1-GATE SORTS	121	ACT_NO	NUMBER	SPEC_A	ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)	(kBq)

1	2	1.7%	-14000	0	-240	4000	9	3.9%	4
2	13	10.7%	-12000	0	-206	8000	84	36.4%	8
3	25	20.7%	-10000	2	-172	12000	36	15.6%	12
4	23	19.0%	-8000	9	-137	16000	21	9.1%	16
5	26	21.5%	-6000	3	-103	20000	14	6.1%	20
6	16	13.2%	-4000	8	-69	24000	9	3.9%	24
7	15	12.4%	-2000	33	-34	28000	8	3.5%	28
8	1	0.8%	0	117	0	32000	8	3.5%	32
TOTAL	121		2000	298	34	36000	3	1.3%	36
			4000	438	69	40000	3	1.3%	40

2-GATE SORTS	110	6000	352	103	44000	4	1.7%	44	
DETECTR	SORTS	FREQ%	8000	193	137	48000	2	0.9%	48
8			10000	79	172	52000	3	1.3%	52
9	5	4.5%	12000	17	206	56000	1	0.4%	56
10	15	13.6%	14000	2	240	60000	2	0.9%	60
11	27	24.5%	16000	1	274	64000	3	1.3%	64
12	20	18.2%	18000	0	309	68000	4	1.7%	68
13	20	18.2%	20000	0	343	72000	2	0.9%	72
14	15	13.6%	22000	0	377	76000	4	1.7%	76
15	8	7.3%	24000	0	412	80000	2	0.9%	80
TOTAL	110		26000	0	446	84000	2	0.9%	84
			>28000	0	0	>84000	7	3.0%	>84
			TOTAL	1552		TOTAL	231		

SUMMARY TOTALS

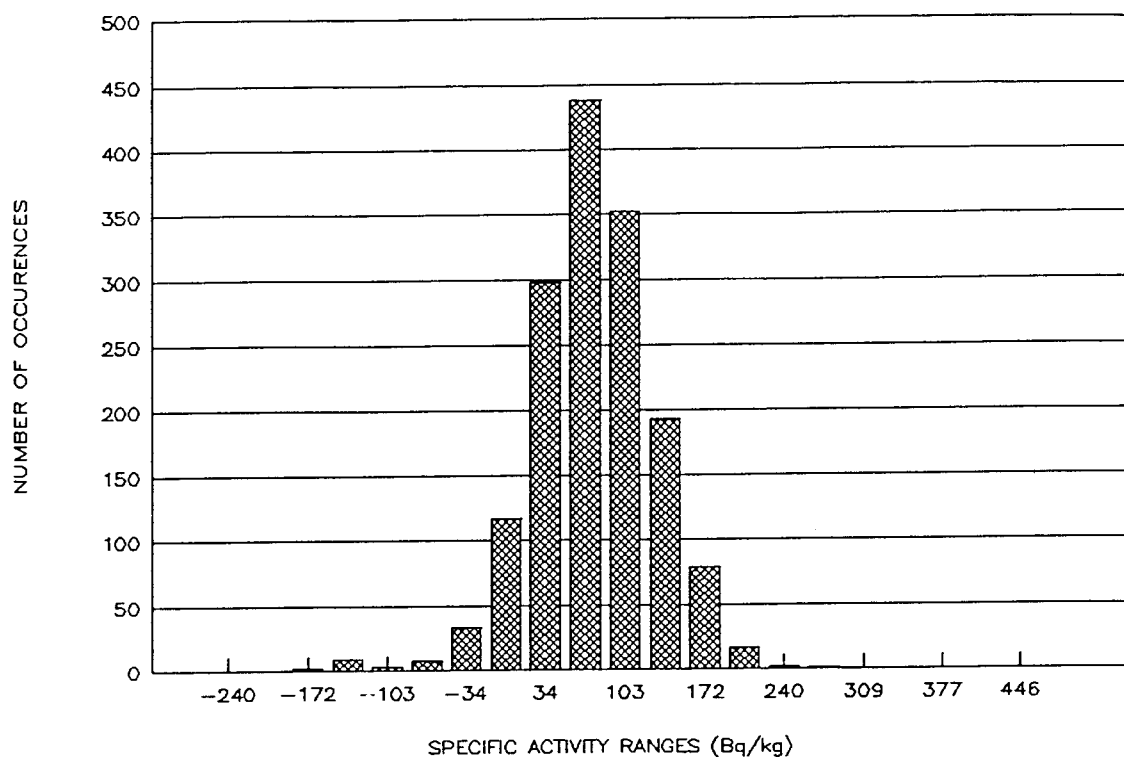
HOT PARTICLE EVENTS	229	SORTS BY ONE GATE ONLY	121
MULTIPARTICLE EVENTS	153	SORTS BY TWO GATES	110
DISTRIBUTED EVENTS	0		

REC CODE EXPLANATION

1.00 Source check (Soil on belt)
 2.00 Empty belt
 3.00 Test (No process soil)

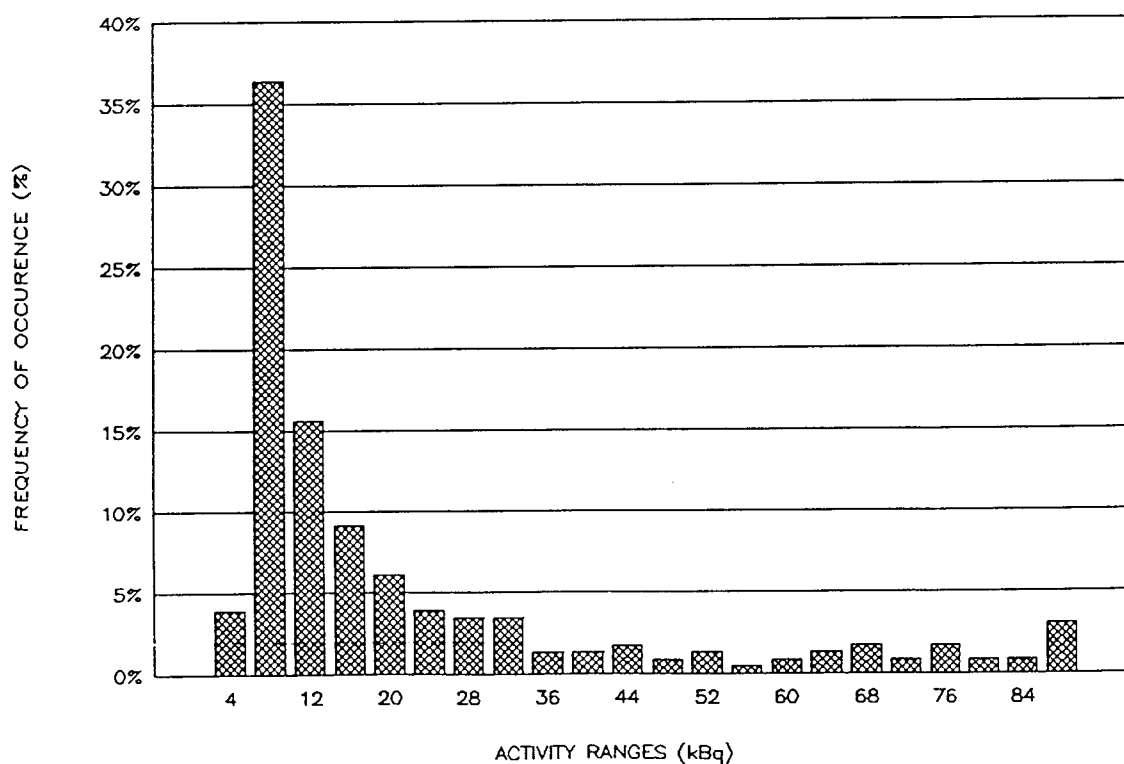
CLEAN SOIL SPECIFIC ACTIVITY

SORTER 2 LOG DATA FOR 28-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 28-Jul-93



JA SOIL CLEANUP PLANT LOG SUMMARY

SORTER 1 29-Jul-93

AVERAGE BACKGROUND COUNT RATE 0.77 ± 0.04 c/sec
 SORTER SOIL DENSITY 1.3 tons/m³
 GROUND SOIL DENSITY 1.65 tons/m³

	CONTAMINATED	CLEAN
MASS TOTAL	0.44 tons	90.5 tons
MAXIMUM/SORT	5.1 kg	58.2 kg
MINIMUM/SORT	0.7 kg	53.1 kg

WEIGHT RECOVERY OR VOLUME RECOVERY		99.5%
EQUIVALENT SOIL-IN-GROUND	0.35 yd³	71.8 yd³ 72.1 yd³/day

PARTICLE ACTIVITY (MAXIMUM ESTIMATE)

TOTAL	7,866 kBq
MAXIMUM/SORT	419 kBq
MINIMUM/SORT	2.9 kBq

DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY	2,777 kBq	2,720 kBq
MAXIMUM/SORT	269 kBq	15 kBq
MINIMUM/SORT	0 Bq	-8 kBq
SPECIFIC ACTIVITY	6,330 Bq/kg	30 Bq/kg

WORK HISTORY

WORK DAY START	05:00 AM	WORK DAY END	03:30 PM
PLANT START-UP	05:00 AM	PLANT SHUT-DOWN	03:30 PM
START SOIL PROCESSING	05:22 AM	END SOIL PROCESSING	03:15 PM
LUNCH START	11:30 AM	LUNCH PERIOD	0.5 hr

WORK HOURS	10.0 hr
AVAILABLE HOURS	10.0 hr
ACTUAL PROCESS HOURS (total 20-sec records)	8.68 hr
DOWN-TIME	1.32 hr
TOTAL SYSTEM PAUSE	1.28 hr
NONAVAILABLE HOURS	0.0 hr
START-UP	0.38 hr
SHUT-DOWN	0.24 hr
PLANT PERFORMANCE	86.8%
PRODUCTIVITY	86.8%

TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 1,987

NONPROCESS RECORDS (Test, calibration, etc) 17

20-SEC PROCESS RECORDS	1,563
TOTAL SORT	0 MD>0 & MND=0
NO SORT	1,249 AD=0 & MD=0 & MND>0
SOME SORT	314 AD>0&0<MD<MNDmax&MND<MNDmax
UNEXPLAINED RECORDS	0
0<AD<1kBq & MD>0	4
AD=0 & MD	0
AD<0 & MD	0
ACT_P <5 kBq	86 20.3%

UNEXPLAIN	PAUSE
TIME	TIME
05:40:45	11:29
08:04:25	15:18

JA SOIL CLEANUP PLANT LOG SUMMARY

2-SEC COUNT PERIODS	15,630	14:11:25
2-SEC RECORDS WITH SORTS	424 (ACT_P >0 kBq)	14:27:05
2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR		
2 DETECTORS	96	81.4%
3 DETECTORS	19	16.1%
4 DETECTORS	3	2.5%
5 DETECTORS	0	0.0%
6 DETECTORS	0	0.0%
7 DETECTORS	0	0.0%
8 DETECTORS	0	0.0%
TOTAL	118	
NET 2-SEC RECORDS WITH SORTS	306	
2-SEC PERIODS WITH NO SORTS	15,324	
AVG TIME BETWEEN 2-SEC SORTS	102.2 sec	

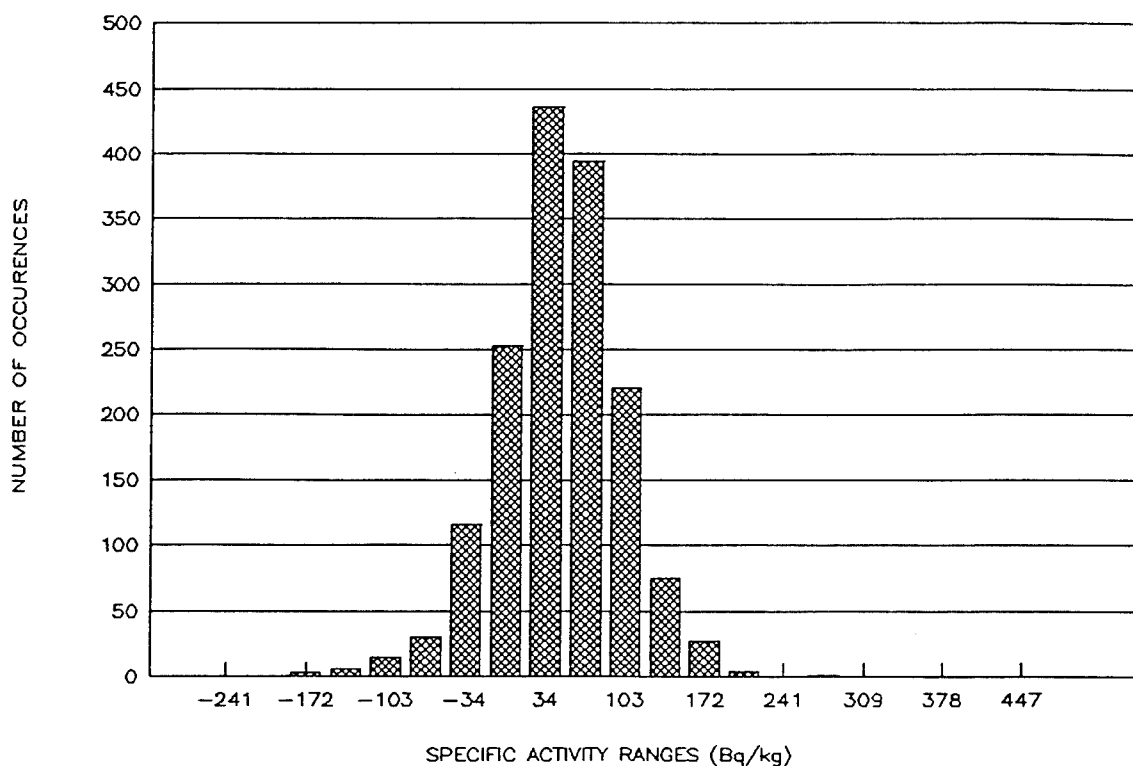
1-GATE SORTS		219	ACT_NO	NUMBER	SPEC_A	ACT_P	SORT FREQ%		ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)		(kBq)
1	2	0.9%	-14000	0	-241	4000	20	4.7%	4
2	14	6.4%	-12000	0	-206	8000	187	44.1%	8
3	32	14.6%	-10000	3	-172	12000	52	12.3%	12
4	30	13.7%	-8000	6	-137	16000	39	9.2%	16
5	46	21.0%	-6000	15	-103	20000	24	5.7%	20
6	43	19.6%	-4000	30	-69	24000	17	4.0%	24
7	43	19.6%	-2000	116	-34	28000	15	3.5%	28
8	9	4.1%	0	253	0	32000	10	2.4%	32
TOTAL	219		2000	436	34	36000	15	3.5%	36
			4000	394	69	40000	6	1.4%	40
2-GATE SORTS		205	6000	220	103	44000	2	0.5%	44
DETECTR	SORTS	FREQ%	8000	75	137	48000	6	1.4%	48
8			10000	27	172	52000	2	0.5%	52
9	6	2.9%	12000	4	206	56000	2	0.5%	56
10	20	9.8%	14000	0	241	60000	3	0.7%	60
11	32	15.6%	16000	1	275	64000	1	0.2%	64
12	34	16.6%	18000	0	309	68000	3	0.7%	68
13	43	21.0%	20000	0	344	72000	3	0.7%	72
14	42	20.5%	22000	0	378	76000	3	0.7%	76
15	28	13.7%	24000	0	412	80000	3	0.7%	80
TOTAL	205		26000	0	447	84000	1	0.2%	84
			>28000	0	0	>84000	10	2.4%	>84
			TOTAL	1580		TOTAL	424		
SUMMARY TOTALS									
HOT PARTICLE EVENTS			416	SORTS BY ONE GATE ONLY			219		
MULTIPARTICLE EVENTS			185	SORTS BY TWO GATES			205		
DISTRIBUTED EVENTS			0						

REC CODE EXPLANATION

1.00 Source check (Soil on belt)
 2.00 Empty belt
 3.00 Test (No process soil)

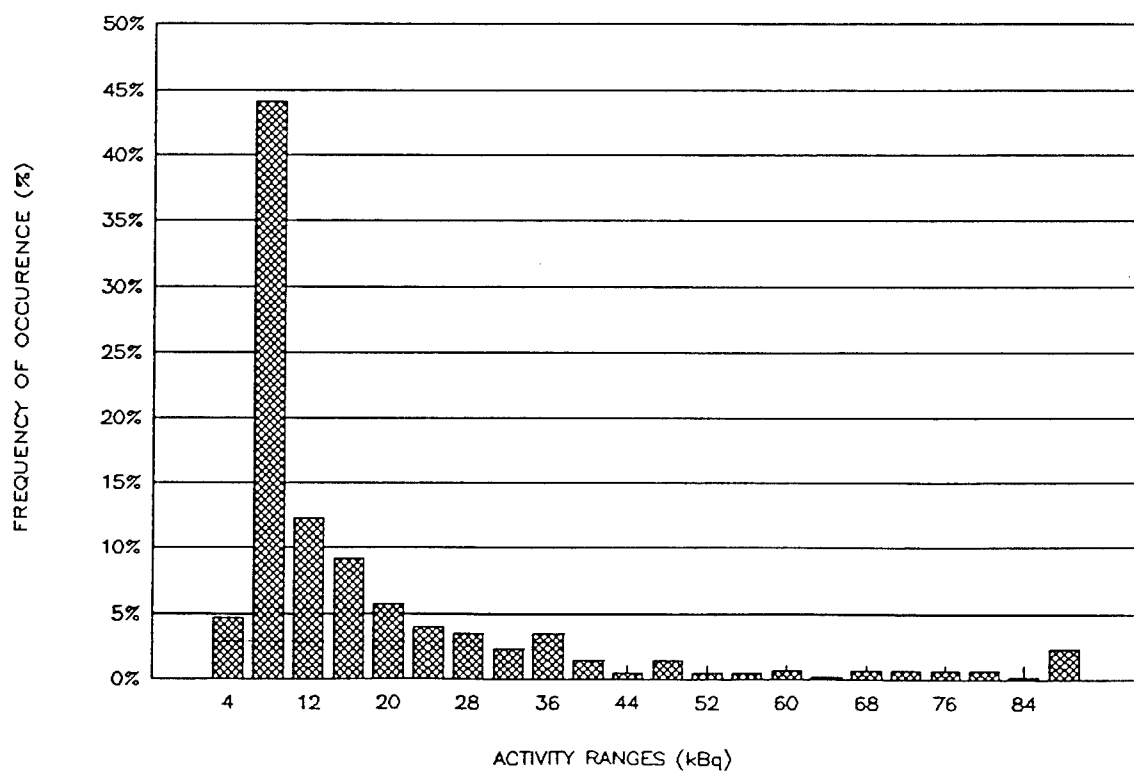
CLEAN SOIL SPECIFIC ACTIVITY

SORTER 1 LOG DATA FOR 29-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 29-Jul-93



JA SOIL CLEANUP PLANT LOG SUMMARY

SORTER 2 29-Jul-93

AVERAGE BACKGROUND COUNT RATE	0.80 ± 0.01 c/sec		
SORTER SOIL DENSITY	1.3 tons/m ³		
GROUND SOIL DENSITY	1.65 tons/m ³		
		CONTAMINATED	CLEAN
MASS TOTAL		0.44 tons	91.1 tons
MAXIMUM/SORT		5.8 kg	58.3 kg
MINIMUM/SORT		0.7 kg	52.4 kg
WEIGHT RECOVERY OR VOLUME RECOVERY			99.5%
EQUIVALENT SOIL-IN-GROUND	0.35 yd ³	72.2 yd ³	72.5 yd ³ /day
PARTICLE ACTIVITY (MAXIMUM ESTIMATE)			
TOTAL	9,721 kBq		
MAXIMUM/SORT	602 kBq		
MINIMUM/SORT	2.8 kBq		
DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY	3,417 kBq	5,798 kBq	
MAXIMUM/SORT	339 kBq	14 kBq	
MINIMUM/SORT	0 Bq	-6 kBq	
SPECIFIC ACTIVITY	7,734 Bq/kg	64 Bq/kg	
WORK HISTORY			
WORK DAY START	05:00 AM	WORK DAY END	03:30 PM
PLANT START-UP	05:00 AM	PLANT SHUT-DOWN	03:30 PM
START SOIL PROCESSING	05:22 AM	END SOIL PROCESSING	03:16 PM
LUNCH START	11:30 AM	LUNCH PERIOD	0.5 hr
WORK HOURS		10.0 hr	
AVAILABLE HOURS		10.0 hr	
ACTUAL PROCESS HOURS (total 20-sec records)		8.72 hr	
DOWN-TIME		1.28 hr	
TOTAL SYSTEM PAUSE		1.28 hr	
NONAVAILABLE HOURS		0.0 hr	
START-UP		0.38 hr	
SHUT-DOWN		0.23 hr	
PLANT PERFORMANCE		87.2%	
PRODUCTIVITY		87.2%	
TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)		1,991	
NONPROCESS RECORDS (Test, calibration, etc)		10	
20-SEC PROCESS RECORDS		1,570	
TOTAL SORT		0 MD>0 & MND=0	
NO SORT		1,246 AD=0 & MD=0 & MND>0	
SOME SORT		324 AD>0&0<MD<MNDmax&MND<MNDmax	
UNEXPLAINED RECORDS		0	
0<AD<1kBq & MD>0	0		UNEXPLAIN PAUSE
AD=0 & MD	0		TIME TIME
AD<0 & MD	0		None 11:29
ACT_P <5 kBq	62 14.7%		15:18

JA SOIL CLEANUP PLANT LOG SUMMARY

2-SEC COUNT PERIODS 15,700
 2-SEC RECORDS WITH SORTS 421 (ACT_P >0 kBq)
 2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR
 2 DETECTORS 103 83.7%
 3 DETECTORS 17 13.8%
 4 DETECTORS 3 2.4%
 5 DETECTORS 0 0.0%
 6 DETECTORS 0 0.0%
 7 DETECTORS 0 0.0%
 8 DETECTORS 0 0.0%
 TOTAL 123
 NET 2-SEC RECORDS WITH SORTS 298
 2-SEC PERIODS WITH NO SORTS 15,402
 AVG TIME BETWEEN 2-SEC SORTS 105.4 sec

1-GATE SORTS		227	ACT_ND	NUMBER	SPEC_A	ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)		(kBq)
1	11	4.8%	-14000	0	-240	4000	17	4.0%	4
2	35	15.4%	-12000	1	-206	8000	160	38.0%	8
3	44	19.4%	-10000	1	-172	12000	69	16.4%	12
4	43	18.9%	-8000	1	-137	16000	37	8.8%	16
5	38	16.7%	-6000	2	-103	20000	19	4.5%	20
6	28	12.3%	-4000	6	-69	24000	24	5.7%	24
7	23	10.1%	-2000	40	-34	28000	13	3.1%	28
8	5	2.2%	0	128	0	32000	7	1.7%	32
TOTAL	227		2000	284	34	36000	12	2.9%	36
			4000	426	69	40000	5	1.2%	40
2-GATE SORTS		194	6000	341	103	44000	11	2.6%	44
DETECTR	SORTS	FREQ%	8000	216	137	48000	6	1.4%	48
8			10000	104	172	52000	1	0.2%	52
9	22	11.3%	12000	22	206	56000	3	0.7%	56
10	31	16.0%	14000	7	240	60000	4	1.0%	60
11	40	20.6%	16000	1	274	64000	1	0.2%	64
12	34	17.5%	18000	0	309	68000	1	0.2%	68
13	32	16.5%	20000	0	343	72000	4	1.0%	72
14	22	11.3%	22000	0	377	76000	6	1.4%	76
15	13	6.7%	24000	0	412	80000	2	0.5%	80
TOTAL	194		26000	0	446	84000	5	1.2%	84
			>28000	0	0	>84000	14	3.3%	>84
			TOTAL	1580		TOTAL	421		

SUMMARY TOTALS

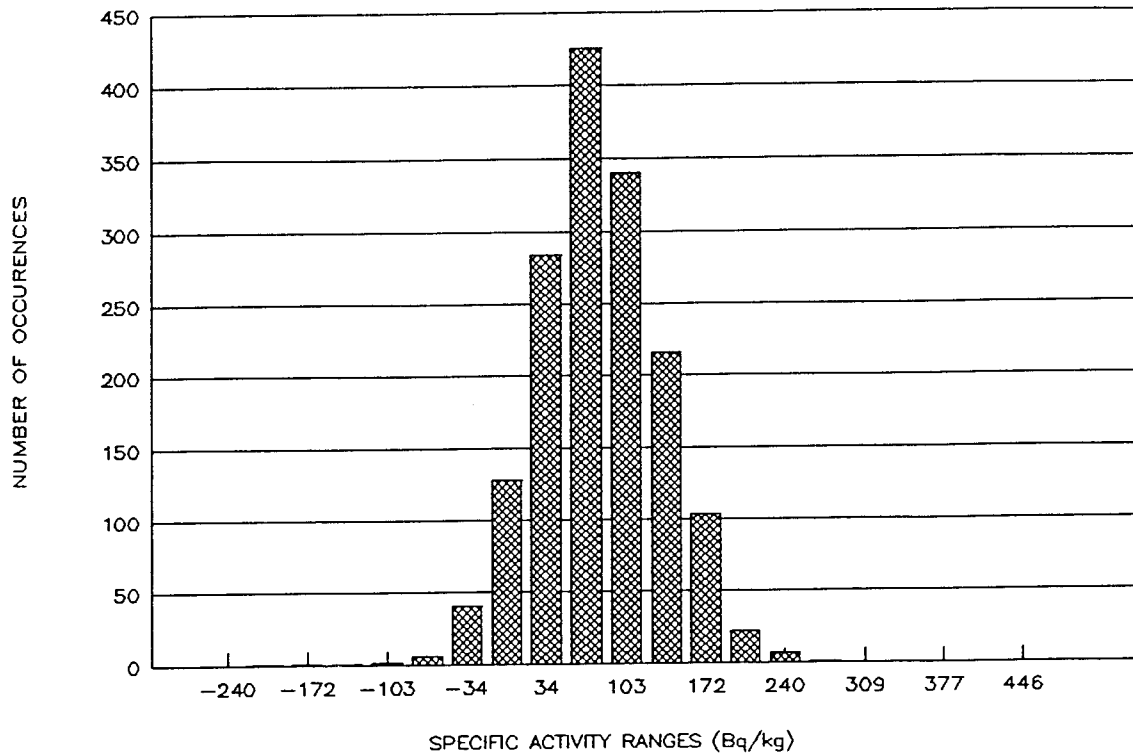
HOT PARTICLE EVENTS	405	SORTS BY ONE GATE ONLY	227
MULTIPARTICLE EVENTS	202	SORTS BY TWO GATES	194
DISTRIBUTED EVENTS	0		

REC CODE EXPLANATION

1.00 Source check (Soil on belt)
 2.00 Empty belt
 3.00 Test (No process soil)

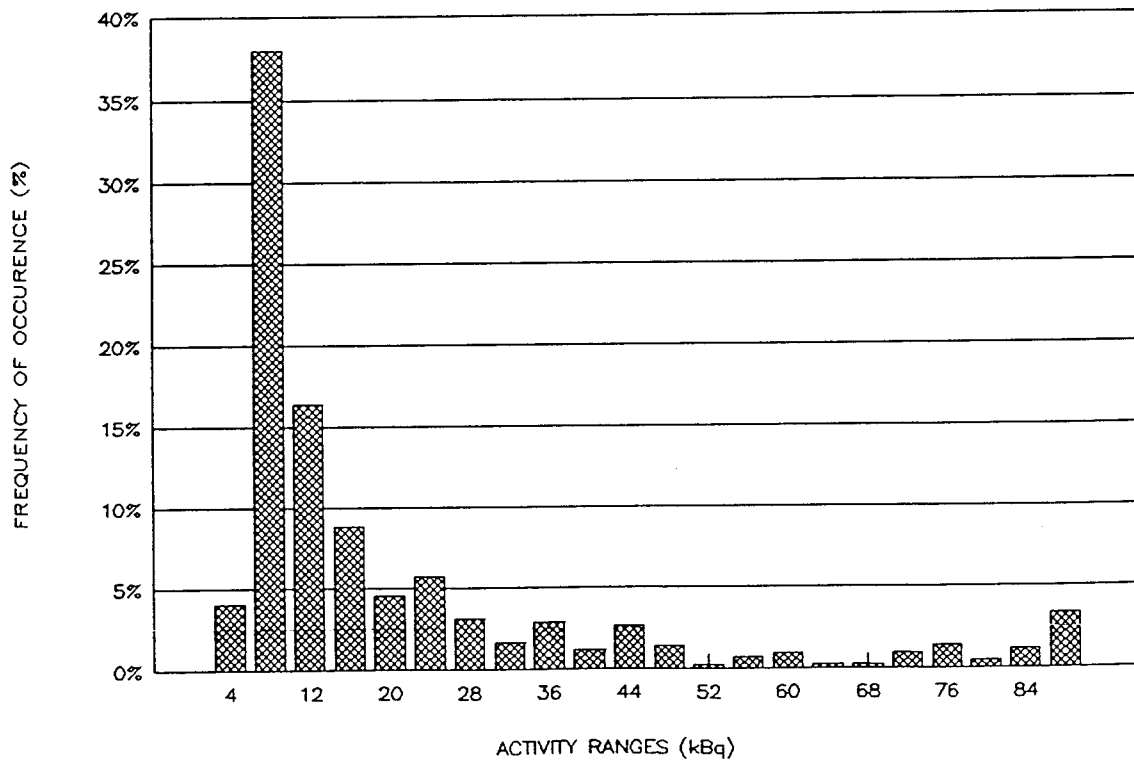
CLEAN SOIL SPECIFIC ACTIVITY

SORTER 2 LOG DATA FOR 29-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 29-Jul-93



JA SOIL CLEANUP PLANT LOG SUMMARY

SORTER 1 30-Jul-93

AVERAGE BACKGROUND COUNT RATE 0.71 ± 0.03 c/sec
 SORTER SOIL DENSITY 1.3 tons/m³
 GROUND SOIL DENSITY 1.65 tons/m³

	CONTAMINATED	CLEAN
MASS TOTAL	0.58 tons	111.0 tons
MAXIMUM/SORT	5.8 kg	58.2 kg
MINIMUM/SORT	0.7 kg	52.4 kg

WEIGHT RECOVERY OR VOLUME RECOVERY		99.5%
EQUIVALENT SOIL-IN-GROUND	0.46 yd ³	88.0 yd ³ 88.5 yd ³ /day

PARTICLE ACTIVITY (MAXIMUM ESTIMATE)

TOTAL	17,592 kBq
MAXIMUM/SORT	3,131 kBq
MINIMUM/SORT	3.0 kBq

DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY	5,632 kBq	5,693 kBq
MAXIMUM/SORT	1950 kBq	16 kBq
MINIMUM/SORT	0 Bq	-12 kBq
SPECIFIC ACTIVITY	9,642 Bq/kg	51 Bq/kg

WORK HISTORY

WORK DAY START	04:30 AM	WORK DAY END	04:30 PM
PLANT START-UP	04:30 AM	PLANT SHUT-DOWN	04:30 PM
START SOIL PROCESSING	04:46 AM	END SOIL PROCESSING	04:02 PM
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 hr

WORK HOURS	12.0 hr
AVAILABLE HOURS	12.0 hr
ACTUAL PROCESS HOURS (total 20-sec records)	10.65 hr
DOWN-TIME	1.35 hr
TOTAL SYSTEM PAUSE	0.62 hr
NONAVAILABLE HOURS	0.0 hr
START-UP	0.28 hr
SHUT-DOWN	0.46 hr
PLANT PERFORMANCE	88.8%
PRODUCTIVITY	88.8%

TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)	2,511
NONPROCESS RECORDS (Test, calibration, etc)	4

20-SEC PROCESS RECORDS	1,917
TOTAL SORT	0 MD>0 & MND=0
NO SORT	1,530 AD=0 & MD=0 & MND>0
SOME SORT	387 AD>0&0<MD<MNDmax&MND<MNDmax
UNEXPLAINED RECORDS	0

0<AD<1kBq & MD>0	0	UNEXPLAIN	PAUSE
AD=0 & MD	0	TIME	TIME
AD<0 & MD	0	None	04:46
ACT_P <5 kBq	106	17.8%	

JA SOIL CLEANUP PLANT LOG SUMMARY

2-SEC COUNT PERIODS 19,170
 2-SEC RECORDS WITH SORTS 594 (ACT_P >0 kBq)
 2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR
 2 DETECTORS 136 80.0%
 3 DETECTORS 29 17.1%
 4 DETECTORS 4 2.4%
 5 DETECTORS 1 0.6%
 6 DETECTORS 0 0.0%
 7 DETECTORS 0 0.0%
 8 DETECTORS 0 0.0%
 TOTAL 170
 NET 2-SEC RECORDS WITH SORTS 424
 2-SEC PERIODS WITH NO SORTS 18,746
 AVG TIME BETWEEN 2-SEC SORTS 90.4 sec

1-GATE SORTS		299	ACT_NO	NUMBER	SPEC_A	ACT_P	SORT FREQ%		ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)		(kBq)
1	6	2.0%	-14000	0	-241	4000	29	4.9%	4
2	20	6.7%	-12000	1	-206	8000	255	42.9%	8
3	38	12.7%	-10000	0	-172	12000	99	16.7%	12
4	45	15.1%	-8000	1	-137	16000	59	9.9%	16
5	61	20.4%	-6000	4	-103	20000	23	3.9%	20
6	51	17.1%	-4000	11	-69	24000	17	2.9%	24
7	62	20.7%	-2000	66	-34	28000	19	3.2%	28
8	16	5.4%	0	233	0	32000	17	2.9%	32
TOTAL	299		2000	386	34	36000	11	1.9%	36
			4000	542	69	40000	7	1.2%	40
2-GATE SORTS		295	6000	396	103	44000	6	1.0%	44
DETECTR	SORTS	FREQ%	8000	186	137	48000	1	0.2%	48
8			10000	74	172	52000	2	0.3%	52
9	14	4.7%	12000	16	206	56000	5	0.8%	56
10	27	9.2%	14000	3	241	60000	5	0.8%	60
11	41	13.9%	16000	2	275	64000	4	0.7%	64
12	69	23.4%	18000	0	309	68000	6	1.0%	68
13	58	19.7%	20000	0	344	72000	7	1.2%	72
14	46	15.6%	22000	0	378	76000	2	0.3%	76
15	40	13.6%	24000	0	412	80000	1	0.2%	80
TOTAL	295		26000	0	447	84000	1	0.2%	84
			>28000	0	0	>84000	18	3.0%	>84
			TOTAL	1921		TOTAL	594		

SUMMARY TOTALS

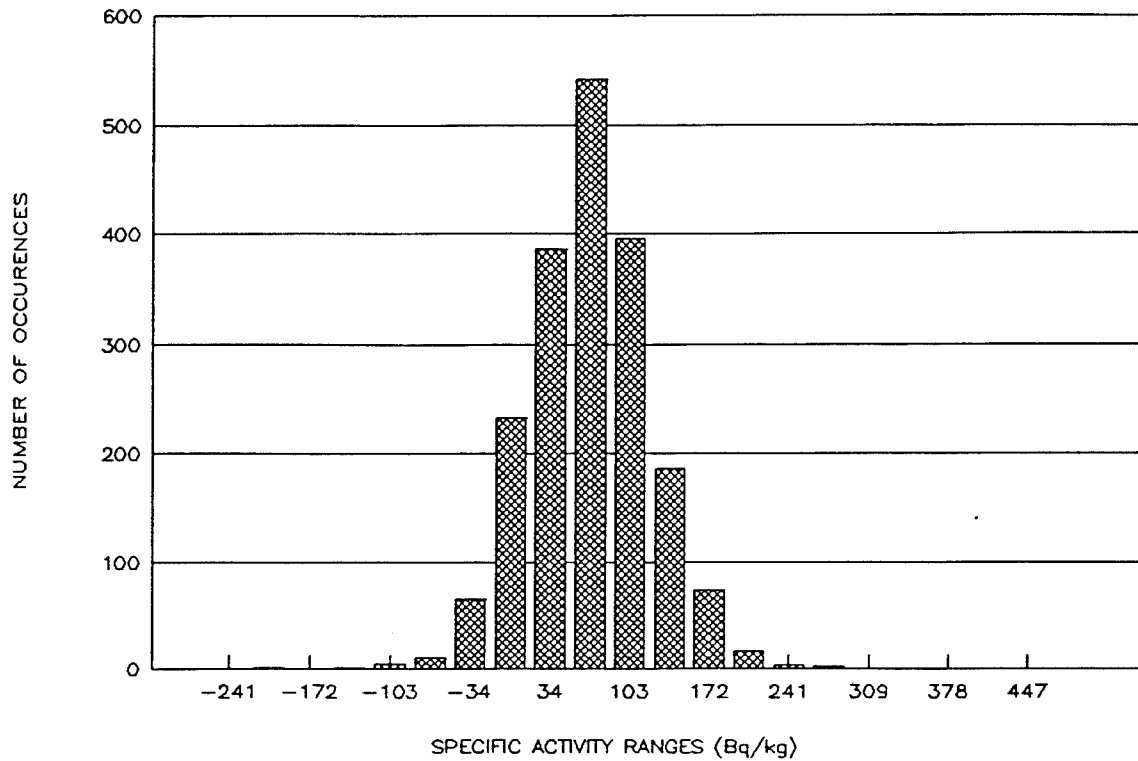
HOT PARTICLE EVENTS	578	SORTS BY ONE GATE ONLY	299
MULTIPARTICLE EVENTS	223	SORTS BY TWO GATES	295
DISTRIBUTED EVENTS	0		

REC CODE EXPLANATION

1.00 Source check (Soil on belt)
 2.00 Empty belt
 3.00 Test (No process soil)

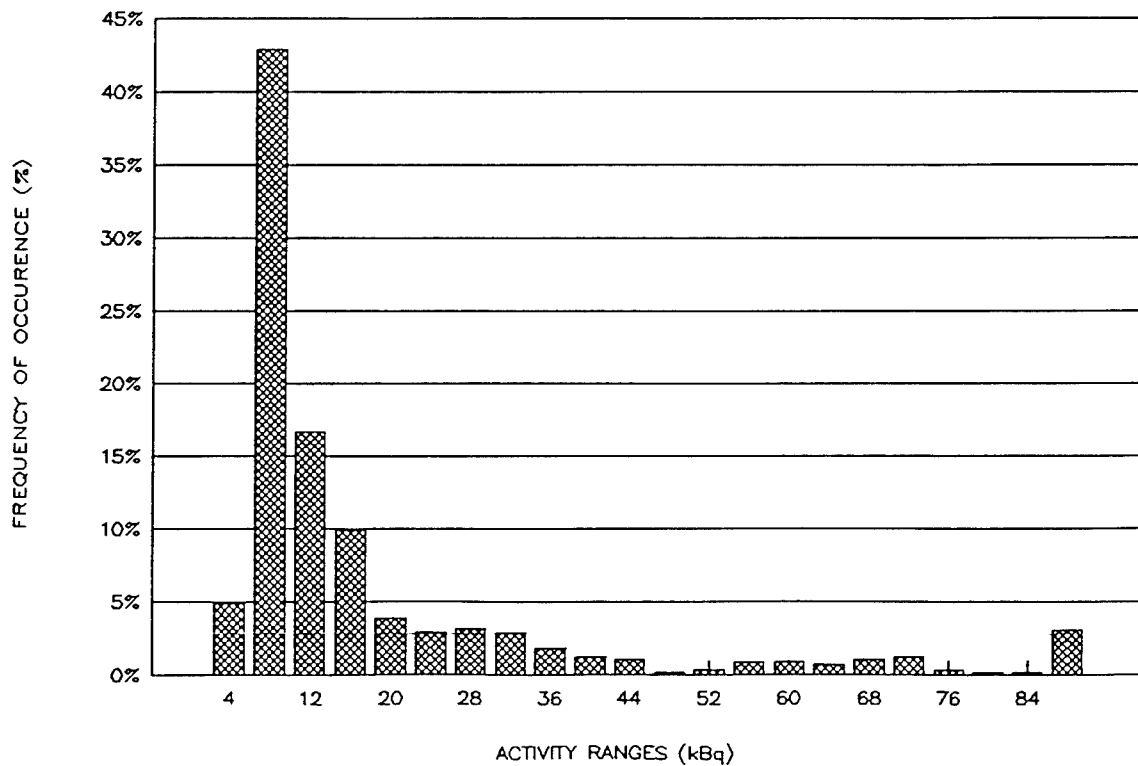
CLEAN SOIL SPECIFIC ACTIVITY

SORTER 1 LOG DATA FOR 30-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 30-Jul-93



JA SOIL CLEANUP PLANT LOG SUMMARY

SORTER 2 30-Jul-93

AVERAGE BACKGROUND COUNT RATE	0.79 ± 0.03 c/sec		
SORTER SOIL DENSITY	1.3 tons/m ³		
GROUND SOIL DENSITY	1.65 tons/m ³		
	CONTAMINATED	CLEAN	
MASS TOTAL	0.58 tons	111.5 tons	
MAXIMUM/SORT	5.1 kg	58.3 kg	
MINIMUM/SORT	0.7 kg	53.2 kg	
WEIGHT RECOVERY OR VOLUME RECOVERY			99.5%
EQUIVALENT SOIL-IN-GROUND	0.46 yd ³	88.4 yd ³	88.9 yd ³ /day
PARTICLE ACTIVITY (MAXIMUM ESTIMATE)			
TOTAL	13,114 kBq		
MAXIMUM/SORT	1,072 kBq		
MINIMUM/SORT	3.0 kBq		
DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY			
MAXIMUM/SORT	4,602 kBq	8,160 kBq	
MINIMUM/SORT	679 kBq	15 kBq	
SPECIFIC ACTIVITY	0 Bq	-6 kBq	
	7,875 Bq/kg	73 Bq/kg	
WORK HISTORY			
WORK DAY START	04:30 AM	WORK DAY END	04:30 PM
PLANT START-UP	04:30 AM	PLANT SHUT-DOWN	04:30 PM
START SOIL PROCESSING	05:24 AM	END SOIL PROCESSING	04:05 PM
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 hr
WORK HOURS	12.0 hr		
AVAILABLE HOURS	12.0 hr		
ACTUAL PROCESS HOURS (total 20-sec records)	10.68 hr		
DOWN-TIME	1.32 hr		
TOTAL SYSTEM PAUSE	0.62 hr		
NONAVAILABLE HOURS	0.0 hr		
START-UP	0.91 hr		
SHUT-DOWN	0.41 hr		
PLANT PERFORMANCE	89.0%		
PRODUCTIVITY	89.0%		
TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)	2,499		
NONPROCESS RECORDS (Test, calibration, etc)	6		
20-SEC PROCESS RECORDS	1,923		
TOTAL SORT	0 MD>0 & MND=0		
NO SORT	1,527 AD=0 & MD=0 & MND>0		
SOME SORT	396 AD>0&0<MD<MNDmax&MND<MNDmax		
UNEXPLAINED RECORDS	0		
0<AD<1kBq & MD>0	1	UNEXPLAIN	PAUSE
AD=0 & MD	0	TIME	TIME
AD<0 & MD	0	14:22:48	04:46
ACT_P <5 kBq	80 13.9%		

JA SOIL CLEANUP PLANT LOG SUMMARY

2-SEC COUNT PERIODS 19,230
 2-SEC RECORDS WITH SORTS 576 (ACT_P >0 kBq)
 2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR
 2 DETECTORS 134 82.2%
 3 DETECTORS 21 12.9%
 4 DETECTORS 7 4.3%
 5 DETECTORS 1 0.6%
 6 DETECTORS 0 0.0%
 7 DETECTORS 0 0.0%
 8 DETECTORS 0 0.0%
 TOTAL 163
 NET 2-SEC RECORDS WITH SORTS 413
 2-SEC PERIODS WITH NO SORTS 18,817
 AVG TIME BETWEEN 2-SEC SORTS 93.1 sec

1-GATE SORTS		301	ACT_ND	NUMBER	SPEC_A	ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)		(kBq)
1	17	5.6%	-14000	0	-240	4000	24	4.2%	4
2	41	13.6%	-12000	1	-206	8000	209	36.3%	8
3	48	15.9%	-10000	0	-172	12000	114	19.8%	12
4	53	17.6%	-8000	1	-137	16000	48	8.3%	16
5	61	20.3%	-6000	2	-103	20000	35	6.1%	20
6	51	16.9%	-4000	2	-69	24000	26	4.5%	24
7	26	8.6%	-2000	23	-34	28000	17	3.0%	28
8	4	1.3%	0	99	0	32000	10	1.7%	32
TOTAL	301		2000	306	34	36000	10	1.7%	36
			4000	512	69	40000	13	2.3%	40
2-GATE SORTS		275	6000	465	103	44000	7	1.2%	44
DETECTR	SORTS	FREQ%	8000	327	137	48000	10	1.7%	48
8			10000	139	172	52000	5	0.9%	52
9	28	10.2%	12000	33	206	56000	5	0.9%	56
10	37	13.5%	14000	16	240	60000	3	0.5%	60
11	54	19.6%	16000	3	274	64000	5	0.9%	64
12	52	18.9%	18000	0	309	68000	6	1.0%	68
13	59	21.5%	20000	0	343	72000	3	0.5%	72
14	31	11.3%	22000	0	377	76000	2	0.3%	76
15	14	5.1%	24000	0	412	80000	2	0.3%	80
TOTAL	275		26000	0	446	84000	2	0.3%	84
			>28000	0	0	>84000	20	3.5%	>84
			TOTAL	1929		TOTAL	576		

SUMMARY TOTALS

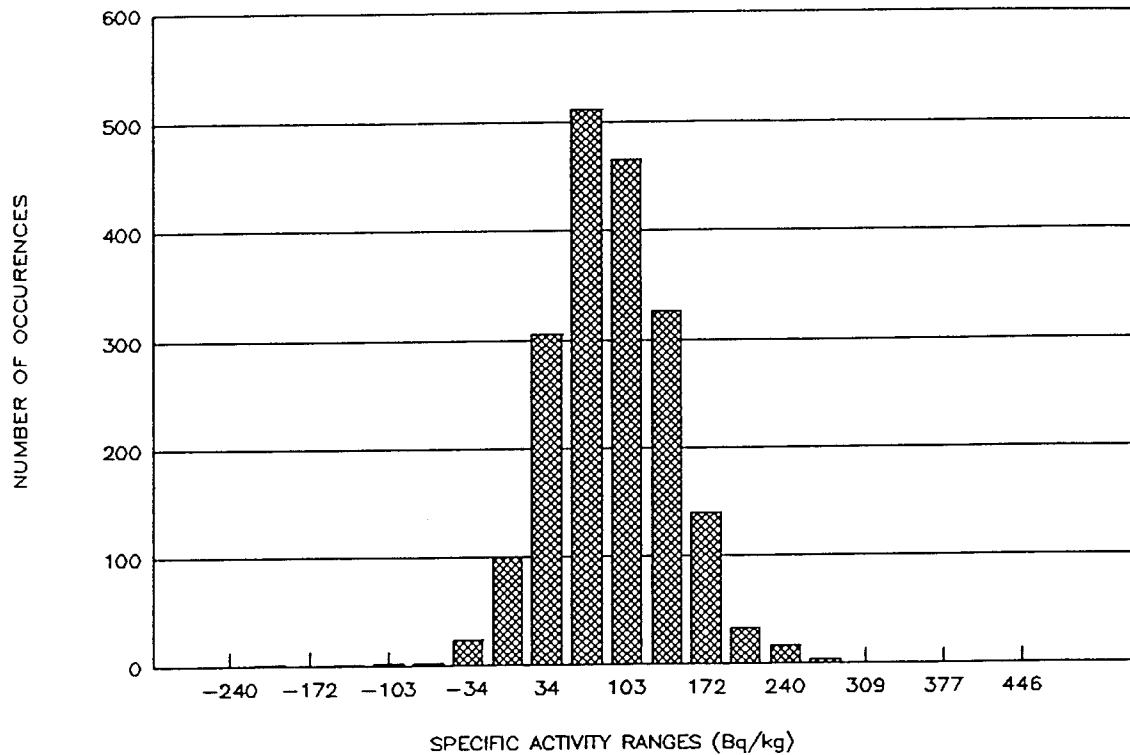
HOT PARTICLE EVENTS	558	SORTS BY ONE GATE ONLY	301
MULTIPARTICLE EVENTS	243	SORTS BY TWO GATES	275
DISTRIBUTED EVENTS	0		

REC CODE EXPLANATION

1.00 Source check (Soil on belt)
 2.00 Empty belt
 3.00 Test (No process soil)

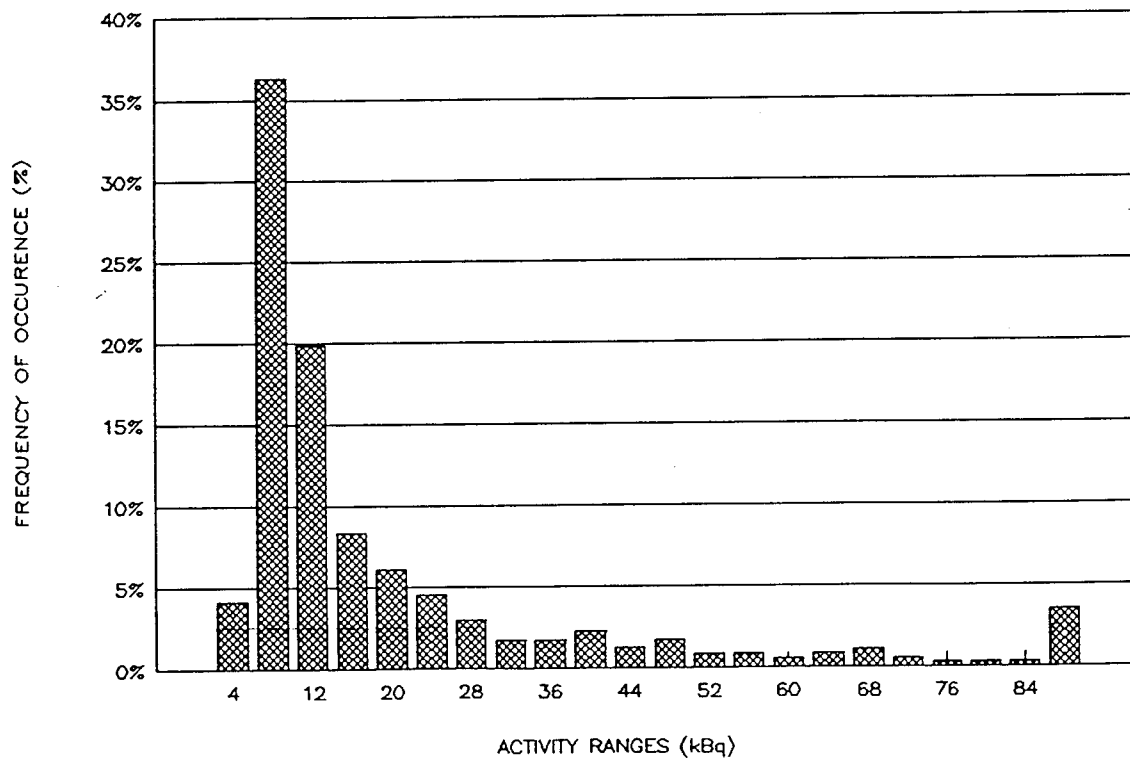
CLEAN SOIL SPECIFIC ACTIVITY

SORTER 2 LOG DATA FOR 30-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 30-Jul-93



JA SOIL CLEANUP PLANT LOG SUMMARY

SORTER 1 31-Jul-93

AVERAGE BACKGROUND COUNT RATE 0.70 ± 0.01 c/sec
 SORTER SOIL DENSITY 1.3 tons/m³
 GROUND SOIL DENSITY 1.65 tons/m³

	CONTAMINATED	CLEAN
MASS TOTAL	0.18 tons	40.4 tons
MAXIMUM/SORT	5.1 kg	58.2 kg
MINIMUM/SORT	0.7 kg	53.1 kg

WEIGHT RECOVERY OR VOLUME RECOVERY		99.6%
EQUIVALENT SOIL-IN-GROUND	0.14 yd ³	32.1 yd ³ 32.2 yd ³ /day

PARTICLE ACTIVITY (MAXIMUM ESTIMATE)

TOTAL	3,681 kBq
MAXIMUM/SORT	275 kBq
MINIMUM/SORT	2.5 kBq

DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY	1,236 kBq	2,121 kBq
MAXIMUM/SORT	135 kBq	12 kBq
MINIMUM/SORT	0 Bq	-6 kBq
SPECIFIC ACTIVITY	6,907 Bq/kg	52 Bq/kg

WORK HISTORY

WORK DAY START	05:00 AM	WORK DAY END	04:30 PM
PLANT START-UP	05:00 AM	PLANT SHUT-DOWN	10:15 AM
START SOIL PROCESSING	05:52 AM	END SOIL PROCESSING	09:44 AM
LUNCH START	11:30 AM	LUNCH PERIOD	0.5 hr

WORK HOURS	11.0 hr
AVAILABLE HOURS	5.2 hr
ACTUAL PROCESS HOURS (total 20-sec records)	3.88 hr
DOWN-TIME	1.37 hr
TOTAL SYSTEM PAUSE	0.00 hr
NONAVAILABLE HOURS	5.8 hr
START-UP	0.87 hr
SHUT-DOWN	0.51 hr
PLANT PERFORMANCE	73.9%
PRODUCTIVITY	35.3%

TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 850

NONPROCESS RECORDS (Test, calibration, etc) 18

20-SEC PROCESS RECORDS	698
TOTAL SORT	0 MD>0 & MND=0
NO SORT	567 AD=0 & MD=0 & MND>0
SOME SORT	131 AD>0&0<MD<MNDmax&MND<MNDmax
UNEXPLAINED RECORDS	0
0<AD<1kBq & MD>0	1
AD=0 & MD	0
AD<0 & MD	0
ACT_P <5 kBq	34 22.4%

UNEXPLAIN	PAUSE
TIME	TIME
07:46:41	None

JA SOIL CLEANUP PLANT LOG SUMMARY

2-SEC COUNT PERIODS 6,980
 2-SEC RECORDS WITH SORTS 152 (ACT_P >0 kBq)
 2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR
 2 DETECTORS 38 70.4%
 3 DETECTORS 11 20.4%
 4 DETECTORS 4 7.4%
 5 DETECTORS 1 1.9%
 6 DETECTORS 0 0.0%
 7 DETECTORS 0 0.0%
 8 DETECTORS 0 0.0%
 TOTAL 54
 NET 2-SEC RECORDS WITH SORTS 98
 2-SEC PERIODS WITH NO SORTS 6,882
 AVG TIME BETWEEN 2-SEC SORTS 142.4 sec

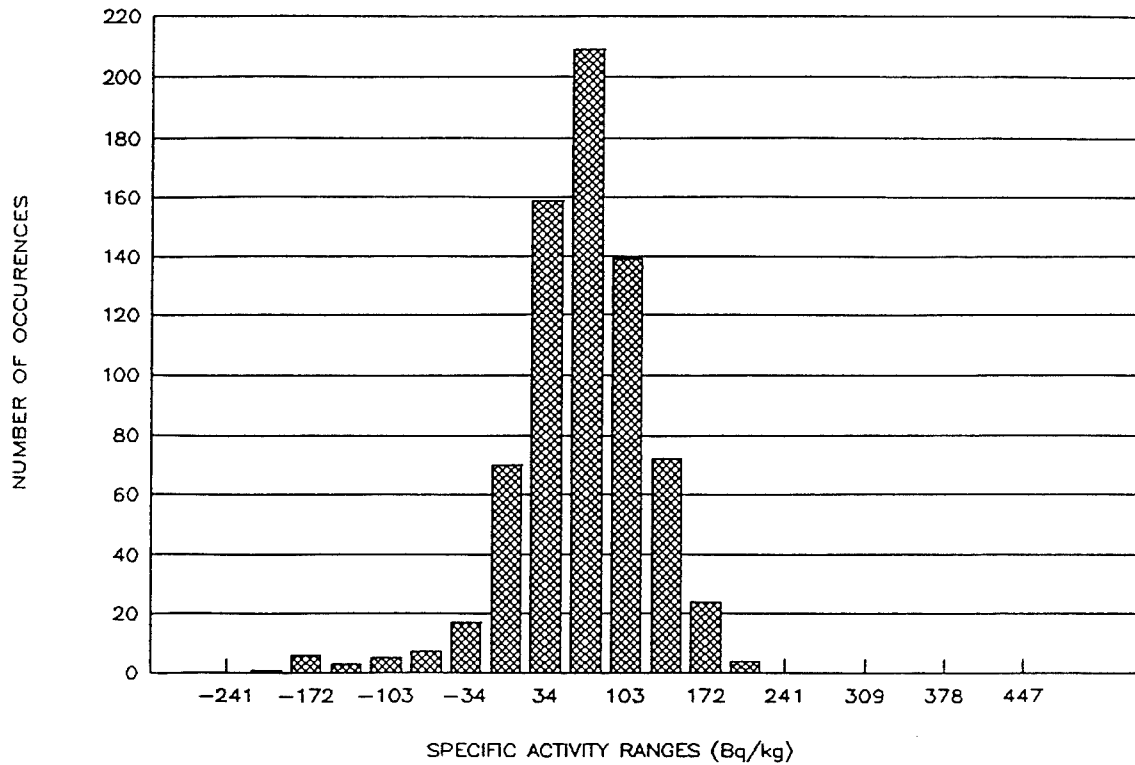
1-GATE SORTS		68	ACT_NO	NUMBER	SPEC_A	ACT_P	SORT FREQ%		ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)		(kBq)
1	1	1.5%	-14000	0	-241	4000	11	7.2%	4
2	10	14.7%	-12000	1	-206	8000	61	40.1%	8
3	10	14.7%	-10000	6	-172	12000	22	14.5%	12
4	14	20.6%	-8000	3	-137	16000	14	9.2%	16
5	15	22.1%	-6000	5	-103	20000	4	2.6%	20
6	8	11.8%	-4000	7	-69	24000	4	2.6%	24
7	8	11.8%	-2000	17	-34	28000	5	3.3%	28
8	2	2.9%	0	70	0	32000	3	2.0%	32
TOTAL	68		2000	159	34	36000	3	2.0%	36
			4000	209	69	40000	2	1.3%	40
2-GATE SORTS		84	6000	139	103	44000	2	1.3%	44
DETECTR	SORTS	FREQ%	8000	72	137	48000	1	0.7%	48
8			10000	24	172	52000	1	0.7%	52
9	8	9.5%	12000	4	206	56000	0	0.0%	56
10	13	15.5%	14000	0	241	60000	2	1.3%	60
11	15	17.9%	16000	0	275	64000	2	1.3%	64
12	20	23.8%	18000	0	309	68000	2	1.3%	68
13	14	16.7%	20000	0	344	72000	1	0.7%	72
14	10	11.9%	22000	0	378	76000	0	0.0%	76
15	4	4.8%	24000	0	412	80000	0	0.0%	80
TOTAL	84		26000	0	447	84000	3	2.0%	84
			>28000	0	0	>84000	9	5.9%	>84
			TOTAL	716		TOTAL	152		
SUMMARY TOTALS									
HOT PARTICLE EVENTS			165	SORTS BY ONE GATE ONLY			68		
MULTIPARTICLE EVENTS			81	SORTS BY TWO GATES			84		
DISTRIBUTED EVENTS			0						

REC CODE EXPLANATION

1.00 Source check (Soil on belt)
 2.00 Empty belt
 3.00 Test (No process soil)

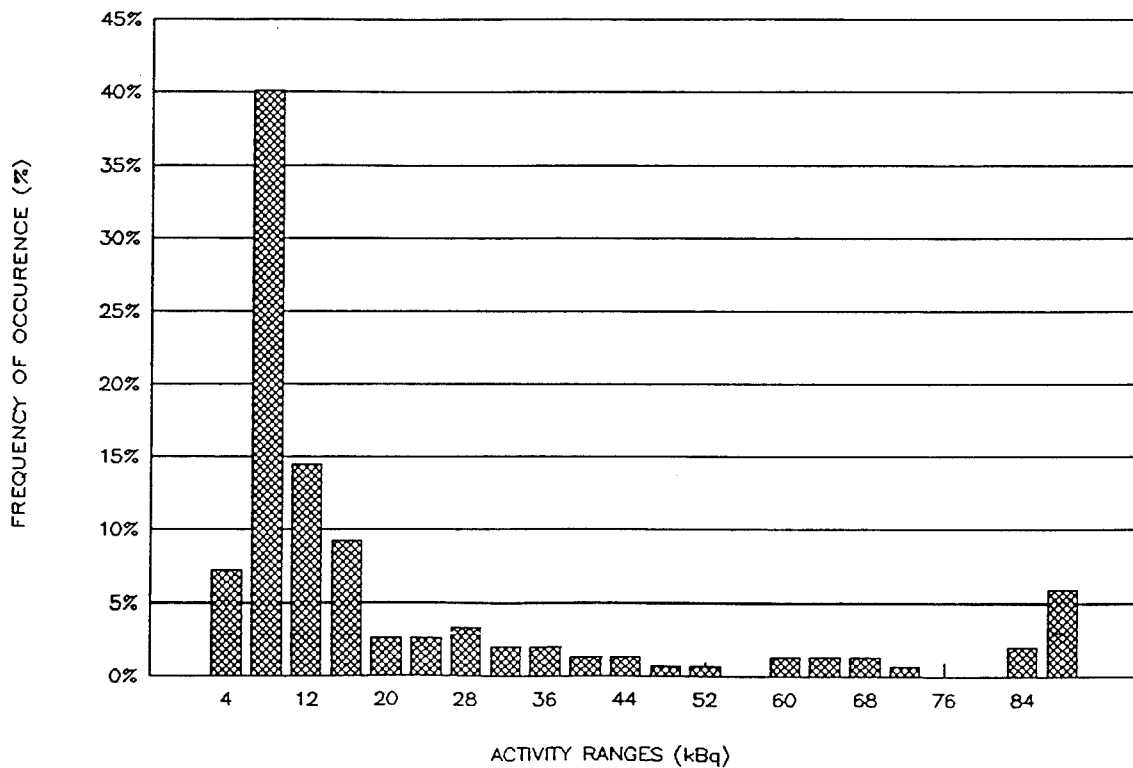
CLEAN SOIL SPECIFIC ACTIVITY

SORTER 1 LOG DATA FOR 31-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 31-Jul-93



JA SOIL CLEANUP PLANT LOG SUMMARY

SORTER 2 31-Jul-93

AVERAGE BACKGROUND COUNT RATE	0.75 ± 0.05 c/sec		
SORTER SOIL DENSITY	1.3 tons/m ³		
GROUND SOIL DENSITY	1.65 tons/m ³		
		CONTAMINATED	CLEAN
MASS TOTAL		0.17 tons	40.9 tons
MAXIMUM/SORT		5.1 kg	58.3 kg
MINIMUM/SORT		0.7 kg	53.2 kg
WEIGHT RECOVERY OR VOLUME RECOVERY			99.6%
EQUIVALENT SOIL-IN-GROUND	0.13 yd ³	32.4 yd ³	32.5 yd ³ /day
PARTICLE ACTIVITY (MAXIMUM ESTIMATE)			
TOTAL	2,886 kBq		
MAXIMUM/SORT	84 kBq		
MINIMUM/SORT	3.6 kBq		
DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY			
MAXIMUM/SORT	1,045 kBq	2,873 kBq	
MINIMUM/SORT	54 kBq	14 kBq	
SPECIFIC ACTIVITY	0 Bq	-5 kBq	
	6,326 Bq/kg	70 Bq/kg	
WORK HISTORY			
WORK DAY START	05:00 AM	WORK DAY END	04:30 PM
PLANT START-UP	05:00 AM	PLANT SHUT-DOWN	10:15 AM
START SOIL PROCESSING	05:52 AM	END SOIL PROCESSING	09:46 AM
LUNCH START	11:30 AM	LUNCH PERIOD	0.5 hr
WORK HOURS	11.0 hr		
AVAILABLE HOURS	5.2 hr		
ACTUAL PROCESS HOURS (total 20-sec records)	3.91 hr		
DOWN-TIME	1.34 hr		
TOTAL SYSTEM PAUSE	0.00 hr		
NONAVAILABLE HOURS	5.8 hr		
START-UP	0.87 hr		
SHUT-DOWN	0.48 hr		
PLANT PERFORMANCE	74.5%		
PRODUCTIVITY	35.6%		
TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)	867		
NONPROCESS RECORDS (Test, calibration, etc)	12		
20-SEC PROCESS RECORDS	704		
TOTAL SORT	0 MD>0 & MND=0		
NO SORT	585 AD=0 & MD=0 & MND>0		
SOME SORT	119 AD>0&0<MD<MNDmax&MND<MNDmax		
UNEXPLAINED RECORDS	0		
0<AD<1kBq & MD>0	0	UNEXPLAIN	PAUSE
AD=0 & MD	0	TIME	TIME
AD<0 & MD	0	None	None
ACT_P <5 kBq	22 13.5%		

JA SOIL CLEANUP PLANT LOG SUMMARY

2-SEC COUNT PERIODS 7,040
 2-SEC RECORDS WITH SORTS 163 (ACT_P >0 kBq)
 2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR
 2 DETECTORS 43 93.5%
 3 DETECTORS 3 6.5%
 4 DETECTORS 0 0.0%
 5 DETECTORS 0 0.0%
 6 DETECTORS 0 0.0%
 7 DETECTORS 0 0.0%
 8 DETECTORS 0 0.0%
 TOTAL 46
 NET 2-SEC RECORDS WITH SORTS 117
 2-SEC PERIODS WITH NO SORTS 6,923
 AVG TIME BETWEEN 2-SEC SORTS 120.3 sec

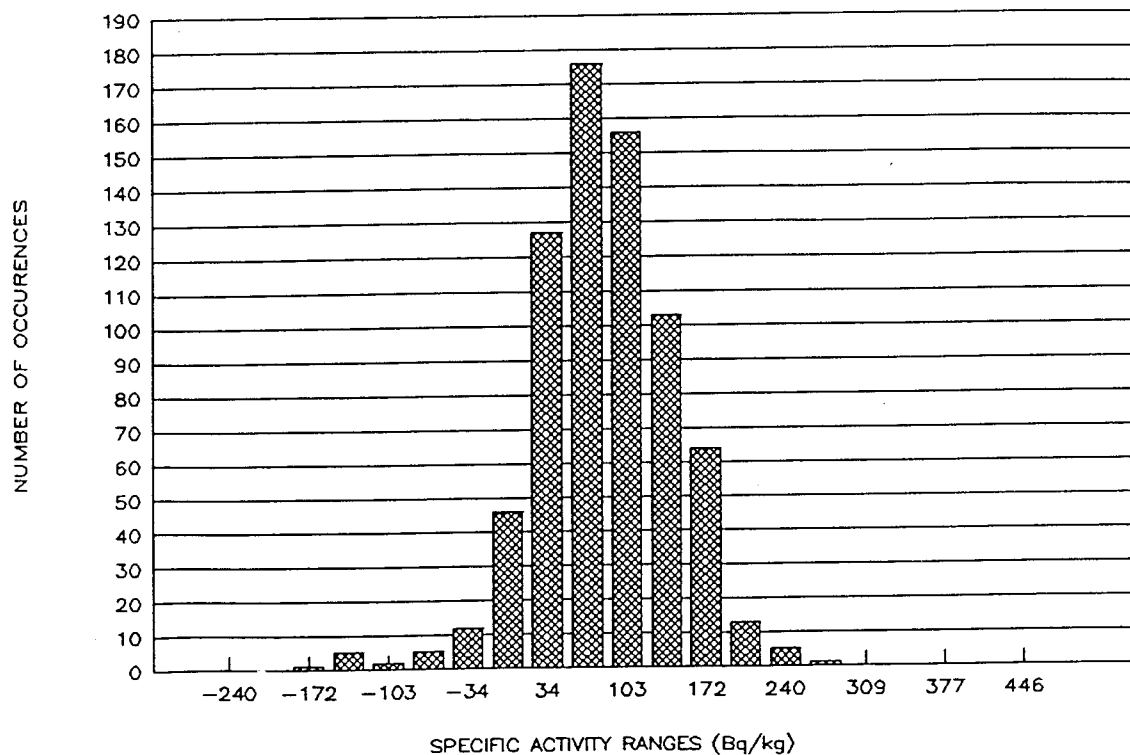
1-GATE SORTS		86	ACT_ND	NUMBER	SPEC_A	ACT_P	SORT FREQ%		ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)		(kBq)
1	7	8.1%	-14000	0	-240	4000	8	4.9%	4
2	18	20.9%	-12000	0	-206	8000	57	35.0%	8
3	10	11.6%	-10000	1	-172	12000	25	15.3%	12
4	14	16.3%	-8000	5	-137	16000	21	12.9%	16
5	19	22.1%	-6000	2	-103	20000	10	6.1%	20
6	10	11.6%	-4000	5	-69	24000	7	4.3%	24
7	7	8.1%	-2000	12	-34	28000	4	2.5%	28
8	1	1.2%	0	46	0	32000	6	3.7%	32
TOTAL	86		2000	127	34	36000	3	1.8%	36
			4000	176	69	40000	1	0.6%	40
2-GATE SORTS		77	6000	156	103	44000	3	1.8%	44
DETECTR	SORTS	FREQ%	8000	103	137	48000	4	2.5%	48
8			10000	64	172	52000	2	1.2%	52
9	9	11.7%	12000	13	206	56000	2	1.2%	56
10	13	16.9%	14000	5	240	60000	1	0.6%	60
11	10	13.0%	16000	1	274	64000	1	0.6%	64
12	17	22.1%	18000	0	309	68000	3	1.8%	68
13	14	18.2%	20000	0	343	72000	2	1.2%	72
14	12	15.6%	22000	0	377	76000	1	0.6%	76
15	2	2.6%	24000	0	412	80000	1	0.6%	80
TOTAL	77		26000	0	446	84000	0	0.0%	84
			>28000	0	0	>84000	1	0.6%	>84
			TOTAL	716		TOTAL	163		
SUMMARY TOTALS									
HOT PARTICLE EVENTS			158	SORTS BY ONE GATE ONLY			86		
MULTIPARTICLE EVENTS			68	SORTS BY TWO GATES			77		
DISTRIBUTED EVENTS			0						

REC CODE EXPLANATION

1.00 Source check (Soil on belt)
 2.00 Empty belt
 3.00 Test (No process soil)

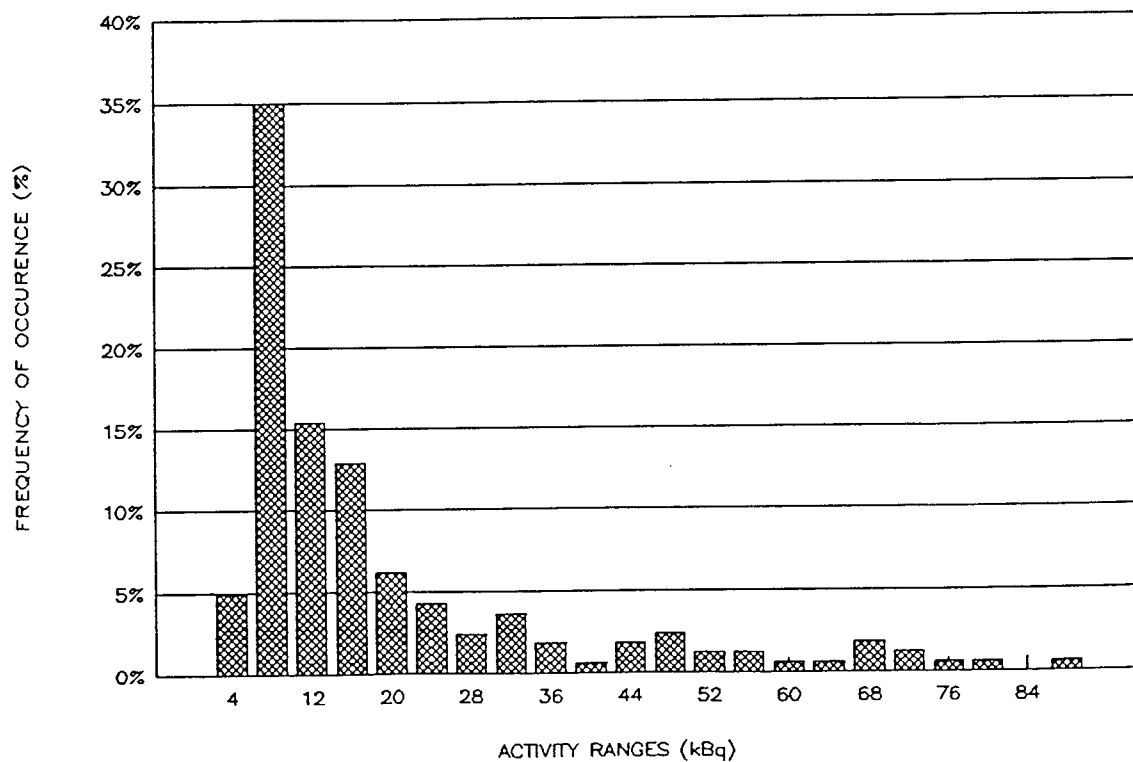
CLEAN SOIL SPECIFIC ACTIVITY

SORTER 2 LOG DATA FOR 31-Jul-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 31-Jul-93



JA SOIL CLEANUP PLANT LOG SUMMARY

SORTER 1 02-Aug-93

AVERAGE BACKGROUND COUNT RATE 0.72 ± 0.04 c/sec
 SORTER SOIL DENSITY 1.3 tons/m³
 GROUND SOIL DENSITY 1.65 tons/m³

	CONTAMINATED	CLEAN
MASS TOTAL	0.14 tons	108.2 tons
MAXIMUM/SORT	3.6 kg	58.2 kg
MINIMUM/SORT	0.7 kg	54.6 kg

WEIGHT RECOVERY OR VOLUME RECOVERY		99.9%
EQUIVALENT SOIL-IN-GROUND	0.11 yd ³	85.8 yd ³ 85.9 yd ³ /day

PARTICLE ACTIVITY (MAXIMUM ESTIMATE)

TOTAL	2,150 kBq
MAXIMUM/SORT	87 kBq
MINIMUM/SORT	3.0 kBq

DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY

	792 kBq	1,085 kBq
MAXIMUM/SORT	50 kBq	13 kBq
MINIMUM/SORT	0 Bq	-8 kBq
SPECIFIC ACTIVITY	5,853 Bq/kg	10 Bq/kg

WORK HISTORY

WORK DAY START	05:00 AM	WORK DAY END	04:30 PM
PLANT START-UP	05:00 AM	PLANT SHUT-DOWN	04:30 PM
START SOIL PROCESSING	05:34 AM	END SOIL PROCESSING	03:54 PM
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 hr

WORK HOURS	11.5 hr
AVAILABLE HOURS	11.5 hr
ACTUAL PROCESS HOURS (total 20-sec records)	10.34 hr
DOWN-TIME	1.16 hr
TOTAL SYSTEM PAUSE	0.00 hr
NONAVAILABLE HOURS	0.0 hr
START-UP	0.57 hr
SHUT-DOWN	0.59 hr
PLANT PERFORMANCE	90.0%
PRODUCTIVITY	90.0%

TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 1,983

NONPROCESS RECORDS (Test, calibration, etc) 8

20-SEC PROCESS RECORDS

TOTAL SORT	1,862	0 MD>0 & MND=0
NO SORT	1,754	AD=0 & MD=0 & MND>0
SOME SORT	108	AD>0&0<MD<MNDmax&MND<MNDmax
UNEXPLAINED RECORDS	0	

0<AD<1kBq & MD>0	1	UNEXPLAIN	PAUSE
AD=0 & MD	0	TIME	TIME
AD<0 & MD	0	12:07:44	None
ACT_P <5 kBq	29	24.0%	

JA SOIL CLEANUP PLANT LOG SUMMARY

2-SEC COUNT PERIODS 18,620
 2-SEC RECORDS WITH SORTS 121 (ACT_P >0 kBq)
 2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR
 2 DETECTORS 25 83.3%
 3 DETECTORS 4 13.3%
 4 DETECTORS 1 3.3%
 5 DETECTORS 0 0.0%
 6 DETECTORS 0 0.0%
 7 DETECTORS 0 0.0%
 8 DETECTORS 0 0.0%
 TOTAL 30
 NET 2-SEC RECORDS WITH SORTS 91
 2-SEC PERIODS WITH NO SORTS 18,529
 AVG TIME BETWEEN 2-SEC SORTS 409.2 sec

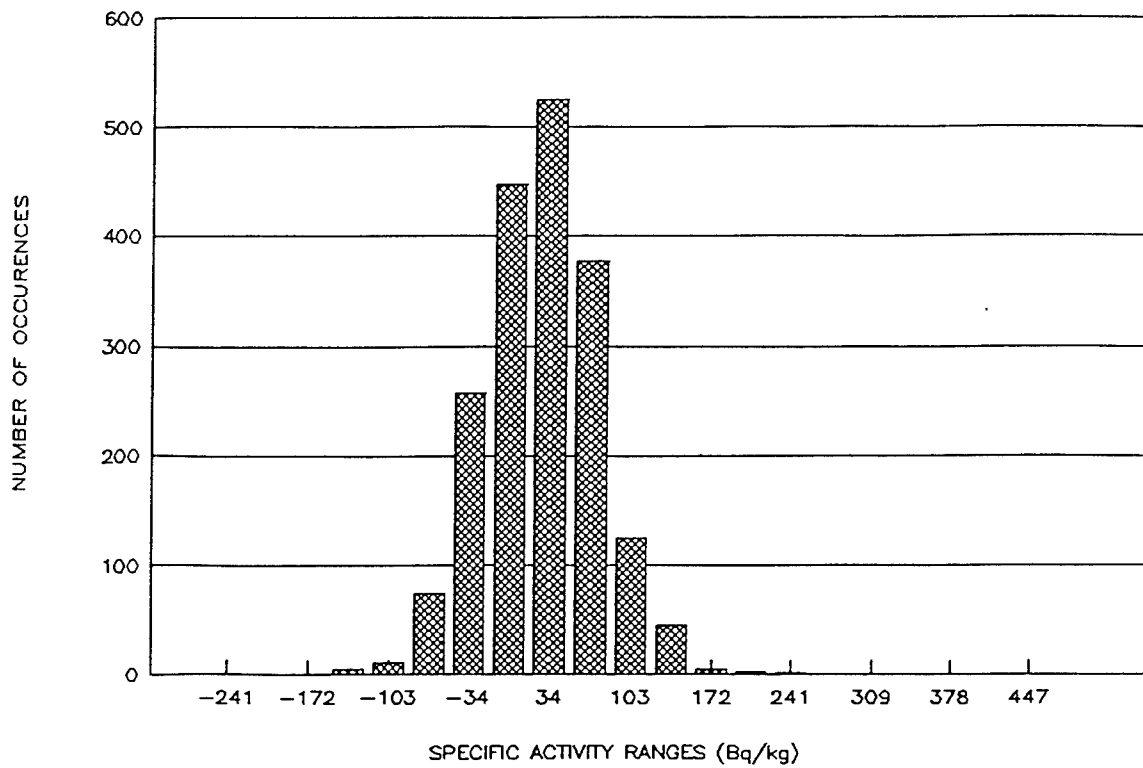
1-GATE SORTS DETECTR	SORTS	59 FREQ%	ACT_NO (Bq)	NUMBER (#)	SPEC_A (Bq/kg)	ACT_P (Bq)	SORT (#)	FREQ%	ACT_P (kBq)
1	4	6.8%	-14000	0	-241	4000	7	5.8%	4
2	5	8.5%	-12000	0	-206	8000	53	43.8%	8
3	7	11.9%	-10000	0	-172	12000	17	14.0%	12
4	12	20.3%	-8000	4	-137	16000	9	7.4%	16
5	19	32.2%	-6000	10	-103	20000	7	5.8%	20
6	7	11.9%	-4000	74	-69	24000	1	0.8%	24
7	3	5.1%	-2000	257	-34	28000	3	2.5%	28
8	2	3.4%	0	447	0	32000	4	3.3%	32
TOTAL	59		2000	525	34	36000	1	0.8%	36
			4000	377	69	40000	3	2.5%	40
2-GATE SORTS		62	6000	124	103	44000	1	0.8%	44
DETECTR	SORTS	FREQ%	8000	44	137	48000	2	1.7%	48
8			10000	5	172	52000	2	1.7%	52
9	4	6.5%	12000	2	206	56000	1	0.8%	56
10	7	11.3%	14000	1	241	60000	0	0.0%	60
11	10	16.1%	16000	0	275	64000	1	0.8%	64
12	18	29.0%	18000	0	309	68000	1	0.8%	68
13	17	27.4%	20000	0	344	72000	1	0.8%	72
14	4	6.5%	22000	0	378	76000	2	1.7%	76
15	2	3.2%	24000	0	412	80000	3	2.5%	80
TOTAL	62		26000	0	447	84000	0	0.0%	84
			>28000	0	0	>84000	2	1.7%	>84
			TOTAL	1870		TOTAL	121		
SUMMARY TOTALS									
HOT PARTICLE EVENTS			120	SORTS BY ONE GATE ONLY			59		
MULTIPARTICLE EVENTS			66	SORTS BY TWO GATES			62		
DISTRIBUTED EVENTS			0						

REC CODE EXPLANATION

1.00 Source check (Soil on belt)
 2.00 Empty belt
 3.00 Test (No process soil)

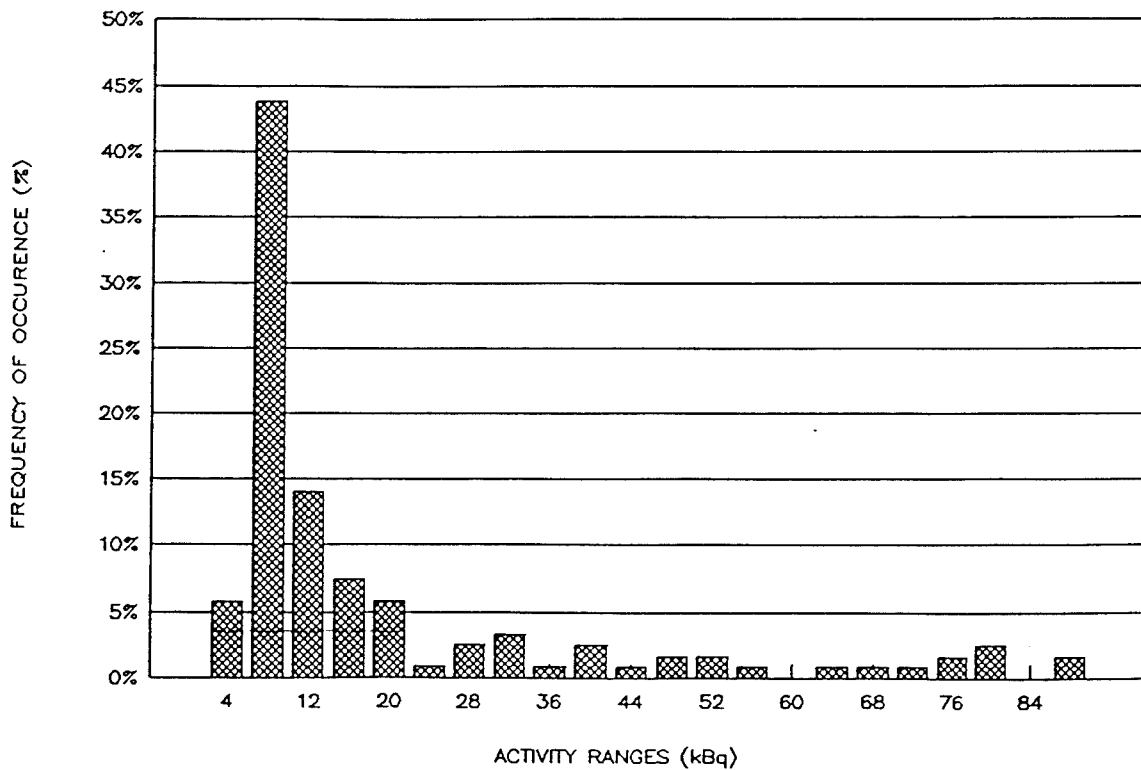
CLEAN SOIL SPECIFIC ACTIVITY

SORTER 1 LOG DATA FOR 02-Aug-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 02-Aug-93



JA SOIL CLEANUP PLANT LOG SUMMARY

SORTER 2 02-Aug-93

AVERAGE BACKGROUND COUNT RATE	0.80 ± 0.02 c/sec		
SORTER SOIL DENSITY	1.3 tons/m ³		
GROUND SOIL DENSITY	1.65 tons/m ³		
	CONTAMINATED	CLEAN	
MASS TOTAL	0.19 tons	107.1 tons	
MAXIMUM/SORT	61.3 kg	58.3 kg	
MINIMUM/SORT	0.7 kg	52.4 kg	
WEIGHT RECOVERY OR VOLUME RECOVERY			99.8%
EQUIVALENT SOIL-IN-GROUND	0.15 yd ³	84.9 yd ³	85.0 yd ³ /day
PARTICLE ACTIVITY (MAXIMUM ESTIMATE)			
TOTAL	4,517 kBq		
MAXIMUM/SORT	398 kBq		
MINIMUM/SORT	3.4 kBq		
DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY			
MAXIMUM/SORT	1,496 kBq	3,392 kBq	
MINIMUM/SORT	265 kBq	17 kBq	
SPECIFIC ACTIVITY	0 Bq	-8 kBq	
	7,973 Bq/kg	32 Bq/kg	
WORK HISTORY			
WORK DAY START	05:00 AM	WORK DAY END	04:30 PM
PLANT START-UP	05:00 AM	PLANT SHUT-DOWN	04:30 PM
START SOIL PROCESSING	05:34 AM	END SOIL PROCESSING	03:54 PM
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 hr
WORK HOURS			11.5 hr
AVAILABLE HOURS			11.5 hr
ACTUAL PROCESS HOURS (total 20-sec records)			10.22 hr
DOWN-TIME			1.28 hr
TOTAL SYSTEM PAUSE			0.11 hr
NONAVAILABLE HOURS			0.0 hr
START-UP			0.57 hr
SHUT-DOWN			0.59 hr
PLANT PERFORMANCE			88.9%
PRODUCTIVITY			88.9%
TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)			1,960
NONPROCESS RECORDS (Test, calibration, etc)			11
20-SEC PROCESS RECORDS			1,840
TOTAL SORT			1 MD>0 & MND=0
NO SORT			1,747 AD=0 & MD=0 & MND>0
SOME SORT			92 AD>0&0<MD<MNDmax&MND<MNDmax
UNEXPLAINED RECORDS			0
0<AD<1kBq & MD>0	0		
AD=0 & MD	1		
AD<0 & MD	0		
ACT_P <5 kBq	13	10.8%	
			UNEXPLAIN PAUSE
			TIME TIME
			13:01:33 12:54

JA SOIL CLEANUP PLANT LOG SUMMARY

2-SEC COUNT PERIODS 18,400

2-SEC RECORDS WITH SORTS 120 (ACT_P >0 kBq)

2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR

2 DETECTORS	32	80.0%
3 DETECTORS	4	10.0%
4 DETECTORS	2	5.0%
5 DETECTORS	2	5.0%
6 DETECTORS	0	0.0%
7 DETECTORS	0	0.0%
8 DETECTORS	0	0.0%
TOTAL	40	

NET 2-SEC RECORDS WITH SORTS 80

2-SEC PERIODS WITH NO SORTS 18,320

AVG TIME BETWEEN 2-SEC SORTS 460.0 sec

1-GATE SORTS	60	ACT_NO	NUMBER	SPEC_A	ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)	(kBq)
1	1	1.7%	-14000	0	-240	4000	5	4.2%
2	5	8.3%	-12000	1	-206	8000	31	25.8%
3	13	21.7%	-10000	2	-172	12000	14	11.7%
4	13	21.7%	-8000	0	-137	16000	11	9.2%
5	14	23.3%	-6000	9	-103	20000	8	6.7%
6	7	11.7%	-4000	40	-69	24000	2	1.7%
7	6	10.0%	-2000	128	-34	28000	6	5.0%
8	1	1.7%	0	315	0	32000	4	3.3%
TOTAL	60		2000	484	34	36000	2	1.7%
			4000	459	69	40000	3	2.5%
2-GATE SORTS	60		6000	261	103	44000	2	1.7%
DETECTR	SORTS	FREQ%	8000	116	137	48000	6	5.0%
8			10000	29	172	52000	0	0.0%
9	3	5.0%	12000	4	206	56000	4	3.3%
10	7	11.7%	14000	1	240	60000	3	2.5%
11	15	25.0%	16000	1	274	64000	3	2.5%
12	14	23.3%	18000	1	309	68000	1	0.8%
13	9	15.0%	20000	0	343	72000	2	1.7%
14	7	11.7%	22000	0	377	76000	3	2.5%
15	5	8.3%	24000	0	412	80000	2	1.7%
TOTAL	60		26000	0	446	84000	0	0.0%
			>28000	0	0	>84000	8	6.7%
			TOTAL	1851		TOTAL	120	
SUMMARY TOTALS								
HOT PARTICLE EVENTS			109	SORTS BY ONE GATE ONLY			60	
MULTIPARTICLE EVENTS			65	SORTS BY TWO GATES			60	
DISTRIBUTED EVENTS			84					

REC CODE EXPLANATION

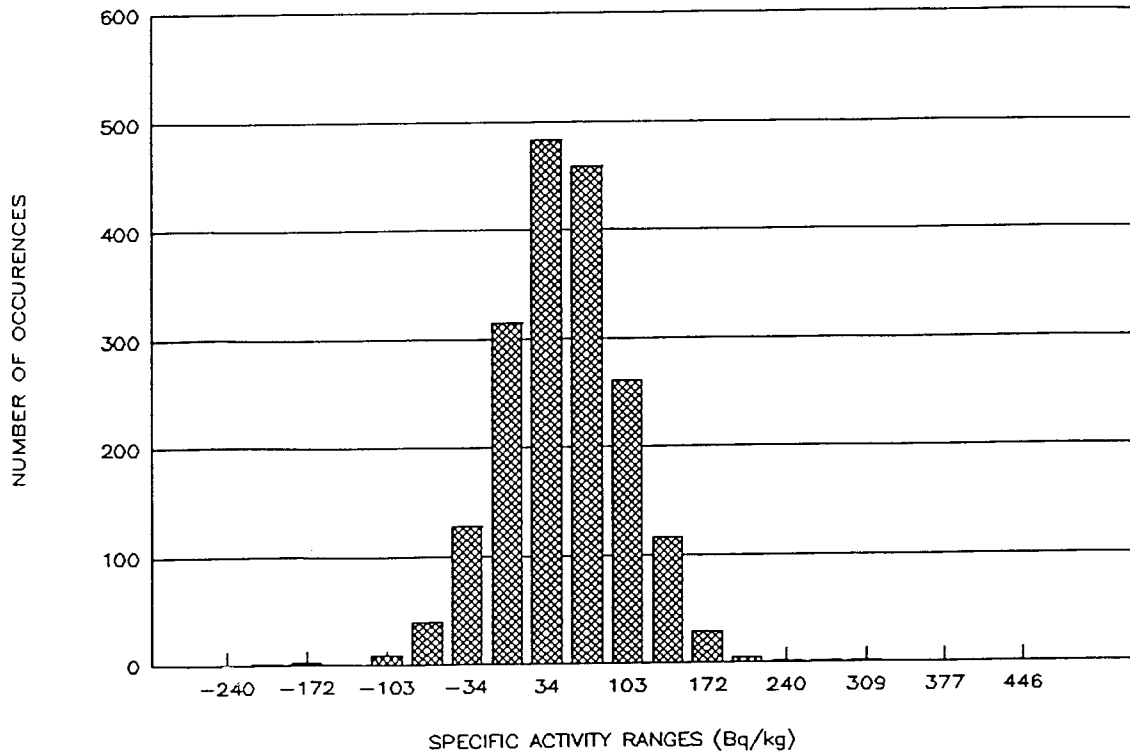
1.00 Source check (Soil on belt)

2.00 Empty belt

3.00 Test (No process soil)

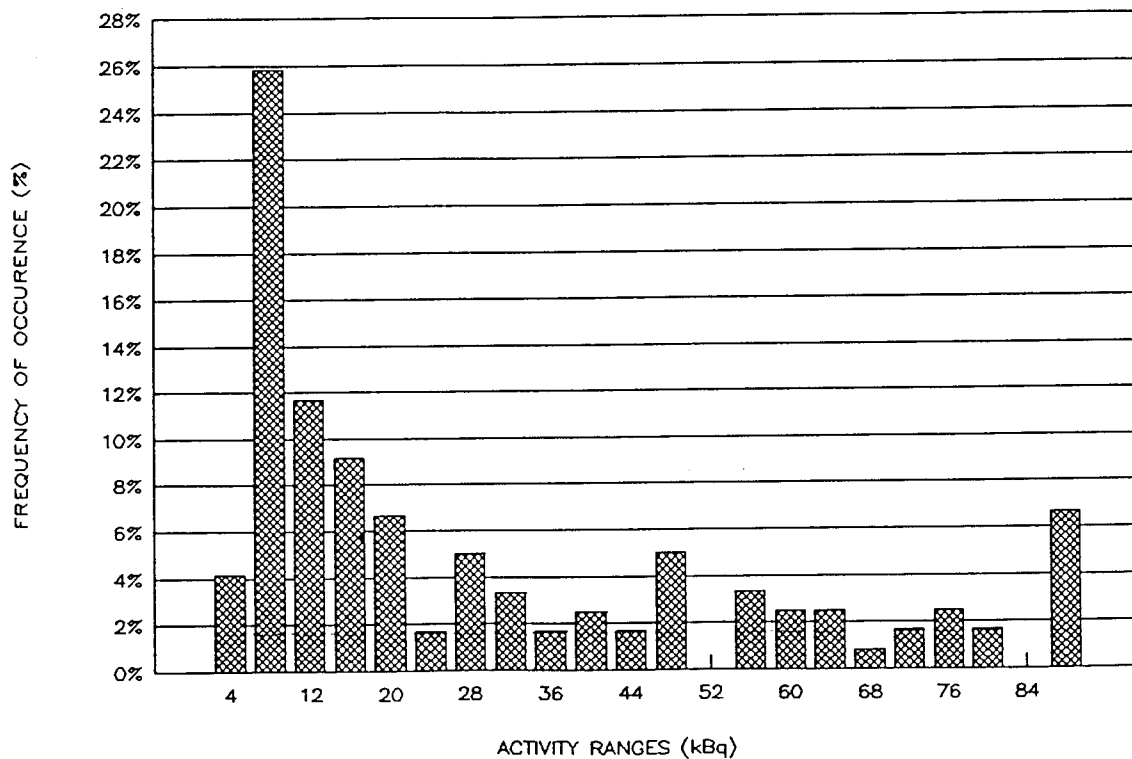
CLEAN SOIL SPECIFIC ACTIVITY

SORTER 2 LOG DATA FOR 02-Aug-93



JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 02-Aug-93



DISTRIBUTION LIST

DNA-TR-93-169

DEPARTMENT OF DEFENSE

DEFENSE NUCLEAR AGENCY

2 CY ATTN: IMTS

ATTN: LE JOHN EDDY

DEFENSE TECHNICAL INFORMATION CENTER

2 CY ATTN: DTIC/OC

FIELD COMMAND DEFENSE NUCLEAR AGENCY

3 CY ATTN: FCIEE MAJ JOSEPH KIMBRELL

ATTN: FCJH MAJ M MELANSON

DEPARTMENT OF ENERGY

OAKRIDGE NATIONAL LABORATORY

ATTN: MARY J WILSON-NICHOLS

US DEPARTMENT OF ENERGY

ATTN: JOHN MATHER

DEPARTMENT OF DEFENSE CONTRACTORS

JAYCOR

2 CY ATTN: CYRUS P KNOWLES

KAMAN SCIENCES CORP

ATTN: DASAC

KAMAN SCIENCES CORPORATION

ATTN: DASAC

TMA/EBERLINE

ATTN: J D MORONEY

ATTN: K S MORONEY

ATTN: NELS JOHNSON

TMA/EBERLINE

2 CY ATTN: RICK DOANE

2 CY ATTN: C L HELLIER

2 CY ATTN: R GRANT